Bowman Distribution BARNES GROUP INC

MODEL BW200

OPERATING INSTRUCTIONS AND PARTS MANUAL

- OPERATING INSTRUCTIONS
- MODE D'EMPLOI
- INSTRUCCIONES PARA EL USO

SPECIFICATIONS

- Pump Volume At Pump Head: 2.1 GPM
- Pump Pressure At Pump Head: 1000 PSI
- Machine Power: 115V, 60Hz, 15 Amp
- Machine Weight: 45 Lbs.
- Shipping Weight: 54 Lbs.
- Machine Dimensions: Height = 14.2", Length = 9.4", Width = 9.2"

SERIAL NUMBER:	**BOWMAN DISTRIBUTION** **1-800-821-6490 Customer Service**
DATE PURCHASED:	
FOR SALES AND SERVICE, PLEASE CONTACT:	

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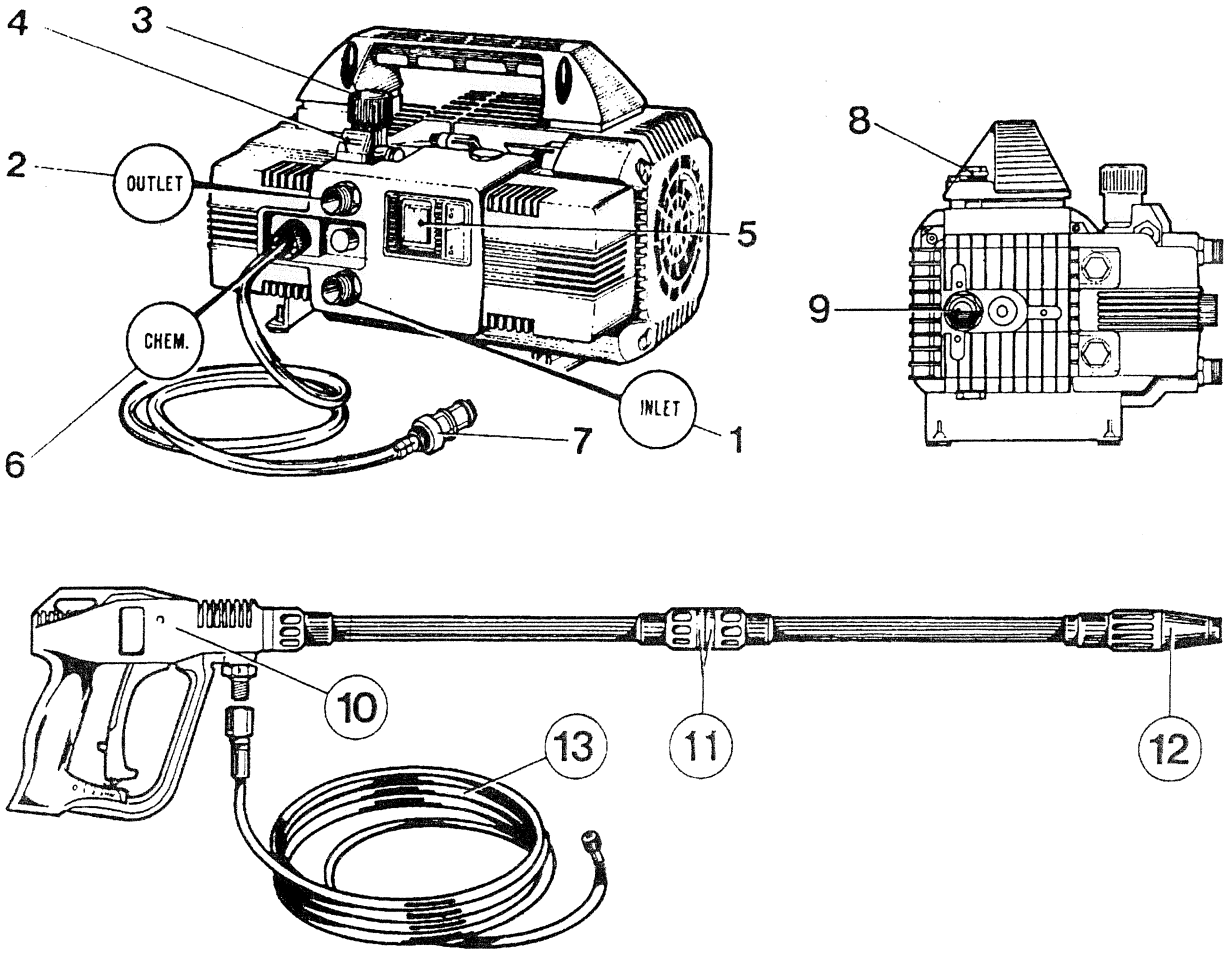


Standard Equipment

1. Inlet hose connection with water filter (INLET)
2. High Pressure connection (OUTLET)
3. Pressure adjusting knob
4. Pressure indicator
5. ON/OFF switch
6. Chemical regulator (CHEM)
7. Chemical filter
8. Oil dipstick
9. Oil level indicator
10. Automatic gun
11. Quick-Lance
12. Multireg Nozzle
13. High pressure hose

EQUIPEMENT STANDARD

1. Raccord d'alimentation d'eau avec filtre (INLET)
2. Raccord du tuyau haute pression (OUTLET)
3. Bouton de réglage de la pression
4. Indicateur de pression
5. Interrupteur Marche/Arrêt
6. Molette de dosage du détergent (CHEM.)
7. Crépine du détergent
8. Jauge de remplissage d'huile
9. Voyant du niveau d'huile
10. Pistolet automatique de sécurité
11. Lance à raccordement rapide "QUICK-LANCE"
12. MULTIREG
13. Tuyau haute pression

EQUIPO STANDARD

1. Entrada + filtro agua (INLET)
2. Salida (OUTLET)
3. Mando de regulación de la presión
4. Manómetro
5. Interruptor
6. Mando de regulación del detergente (CHEM.)
7. Filtro del detergente
8. Tapón de aceite con varilla de nivel
9. Mirilla nivel de aceite
10. Pistola automática
11. Lanza "QUICK-LANCE"
12. MULTIREG
13. Tubo de alta presión

WARNING

Read and observe to prevent severe personal injury or property damage.

- Check hoses, fittings, and trigger gun connections daily for signs of wear, cracks and looseness, and replace as needed.
- Make sure all switches and controls are in the off position prior to plugging in electrical cord. Do not stand in water while plugging and unplugging electrical cord.
- Use UL grounded type receptacles of proper voltage and amperage rating at all times.
- Keep all electrical components on machine dry.
- Do not point wand or gun at yourself or at any person. Bodily injury may result from water under high pressure.
- Wear eye, hand, foot and skin protection at all times while operating equipment.
- Avoid contact with non-insulated areas of pressure washer to prevent the possibility of severe burns.
- Do not allow machine to run unattended.
- Do not run machine indoors or in enclosed areas where flammable vapors, (gasoline, solvents, etc.) may be present.
- Do not store flammable liquids (gasoline, diesel fuel, etc.) near pressure washer or in non-ventilated areas.
- To reduce the risk of injury, close supervision is necessary when machine is used near children.
- Use extreme caution when moving machine over rough or uneven surfaces.
- For permanent installation consult local building codes for installation requirement. Licensed contractor may be required.
- Disconnect power supply prior to performing any maintenance.
- Pressure washers produce a kickback. To prevent personal injuries due to falls use auxiliary safety equipment.
- Do not block or tie trigger of gunjet in open position.
- When applying detergents follow the safety rules on the detergent label.
- Cleaning area should be provided with adequate slopes and drainage. This will reduce the possibility of a fall due to slippery surface.
- Unauthorized machine modification or use of non-approved replacement parts may cause personal injury and/or property damage and will void the manufacturer warranty.
- This machine has been provided with Warning and Instruction decals for the safety of the operator. If these decals are removed or become damaged they should be replaced. Contact your dealer for replacement decals.
- Use detergent from a covered D.O.T. approved container.

ENGLISH

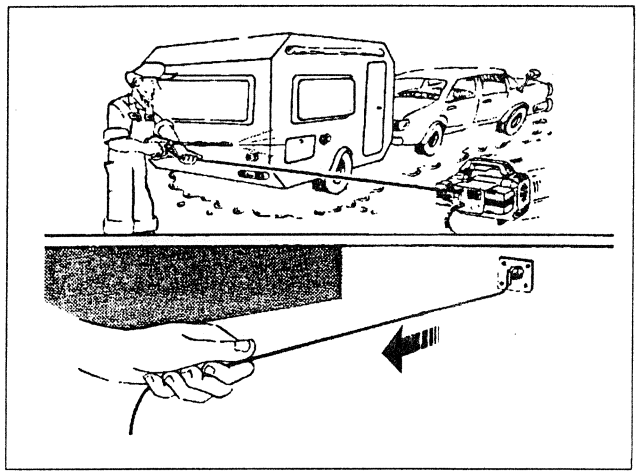
Congratulations for choosing one of the most versatile pressure washers on the market. You have in fact purchased an appliance of high technology made by the largest manufacturer of high pressure pumps in the world. Please read and follow the instructions carefully.

Technical Data

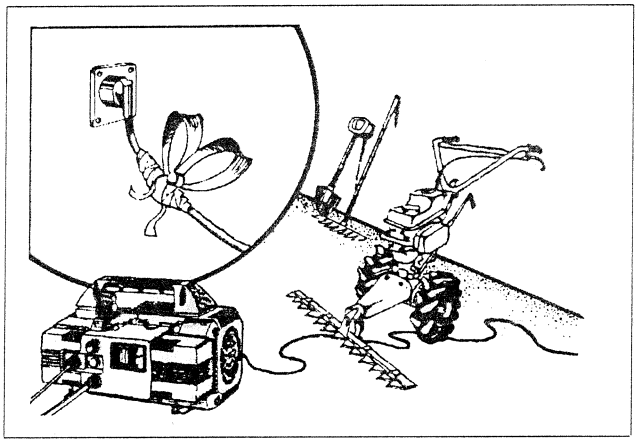
- Volume: 2.1 GPM (8 LPM)
- Maximum Working Pressure: 1000 PSI (70 Bar)
- Single Phase Motor Power: 115V, 60Hz, 15 Amp
- Motor Protector: Current Thermal Overload
- Motor Protection Grade: IP55
- Maximum Inlet Water Temperature: 140°F
- Maximum Suction Depth: 3.3 Ft.
- Hose Length: 26 Ft.
- Weight: 45 Lbs.
- Dimensions: Height = 14.2", Length = 9.4", Width = 9.2"

IMPORTANT PRECAUTIONS

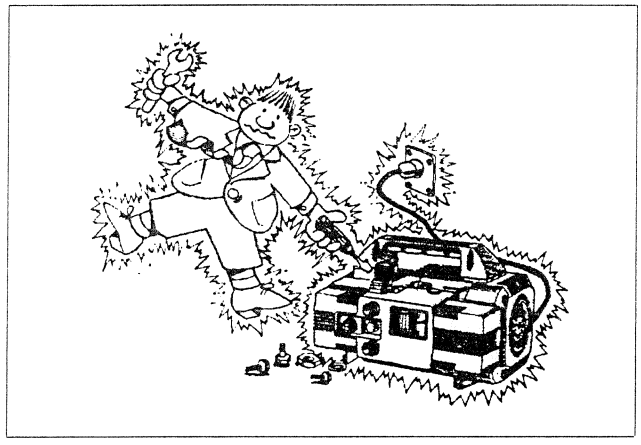
WARNING: The unit must not be run without water. Lack of water will cause serious damage to the seals.



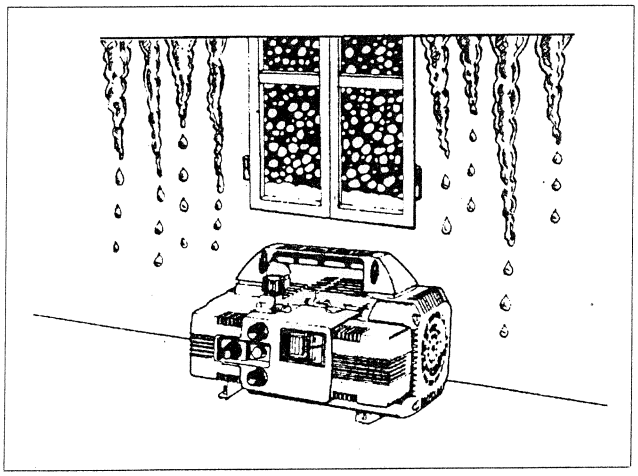
Do not pull cord in order to unplug. Do not pull hose in order to move the unit.



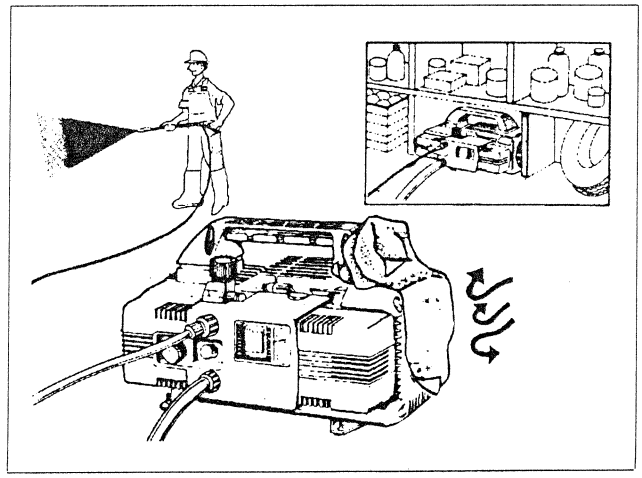
Do not damage or make risky repairs on electric cable. Have worn, cut or damaged cords and plugs replaced by an authorized service person.



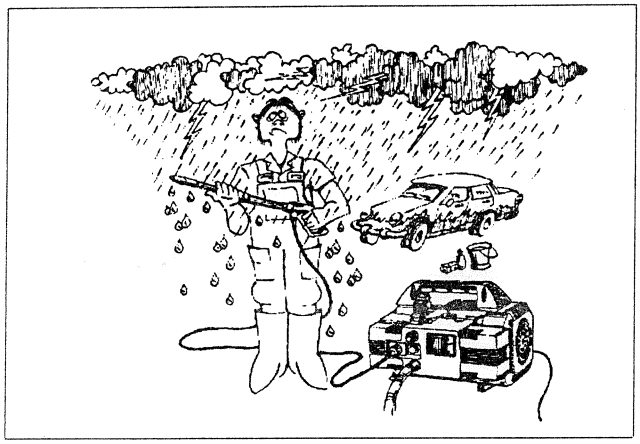
To prevent injury, always disconnect plug before disassembling any part of the unit or any servicing and before leaving the machine.



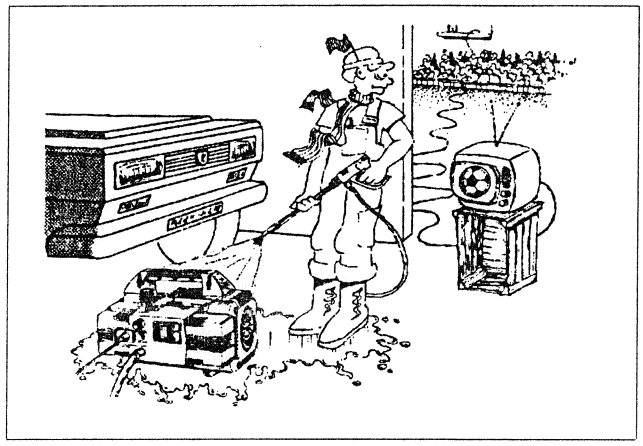
Avoid storing the unit in cold places where there is danger of freezing. Keep the unit in a dry building.



When the unit is working, do not cover and do not place in a closed space where ventilation is insufficient.

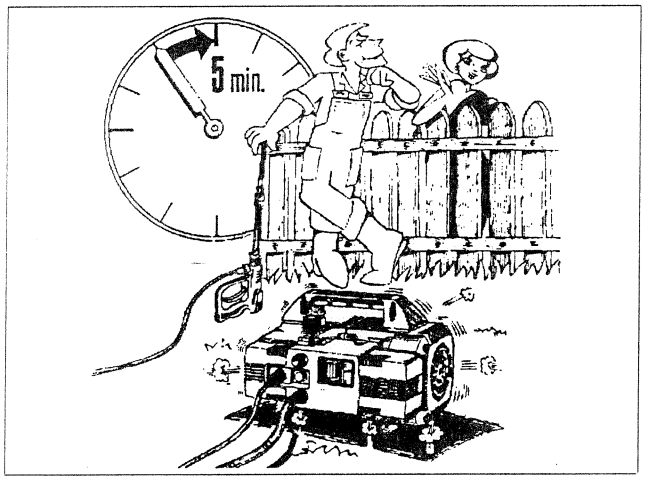


Do not work in the rain, or during thunderstorms.



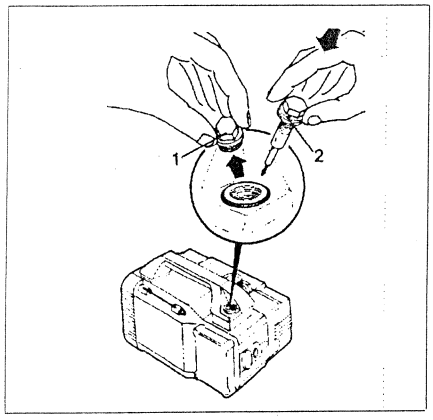
To reduce the risk of electric shock:

a. Do not direct the jet of water at the unit or any other electrical part.
b. Always wear rubber soled footwear when operating the unit.
c. Use only UL approved grounded type receptacles.

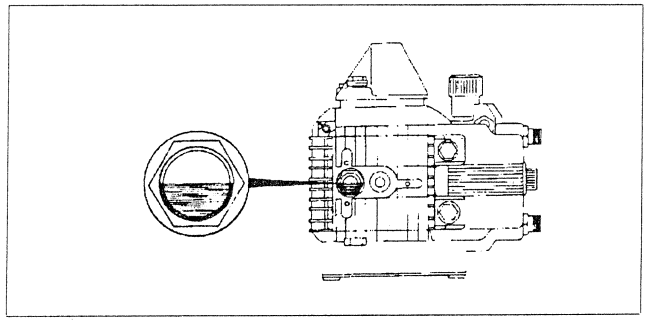


It is important not to run unit for more than 5 minutes with gun in closed position. Should it run for a longer period, the temperature of the re-circulating water will increase rapidly and could risk damaging the pump seals.

INSTALLATION

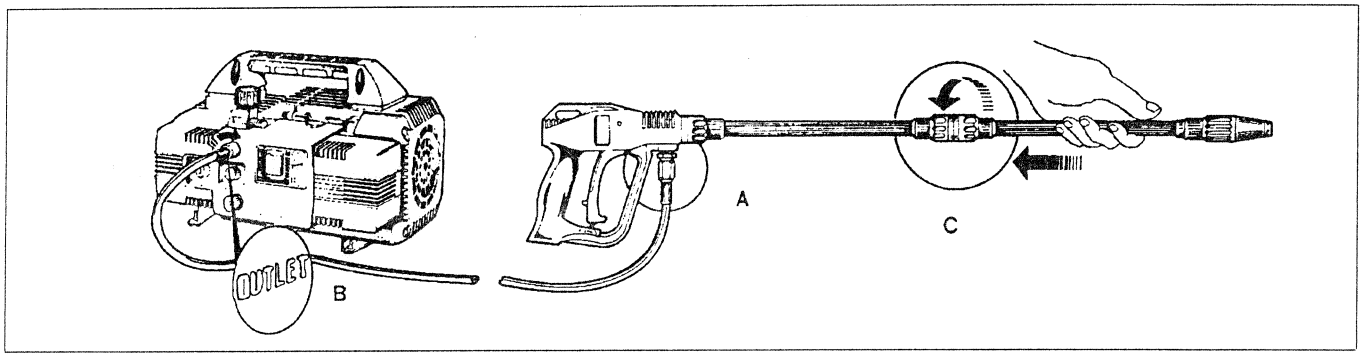


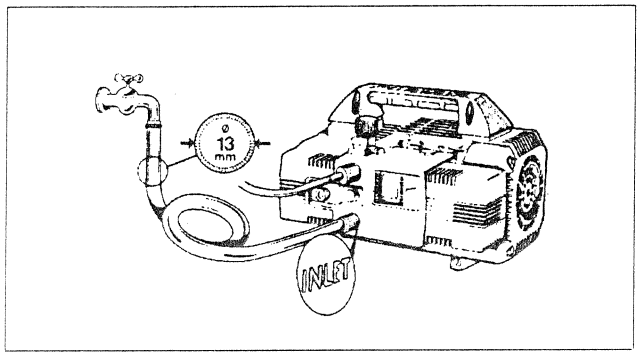
Replace the red oil travel plug (1) with the black and yellow dip-stick (2), which you will find in the box.



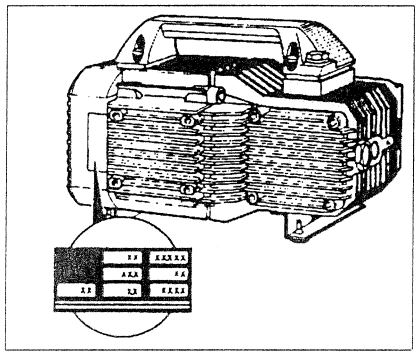
Check that the oil in the sight glass is at the half-way level.

Connect one end of the high pressure hose to the gun (A) and the other to the outlet connection (B). Assemble the lance by pushing the two halves together and turning the connector (C).

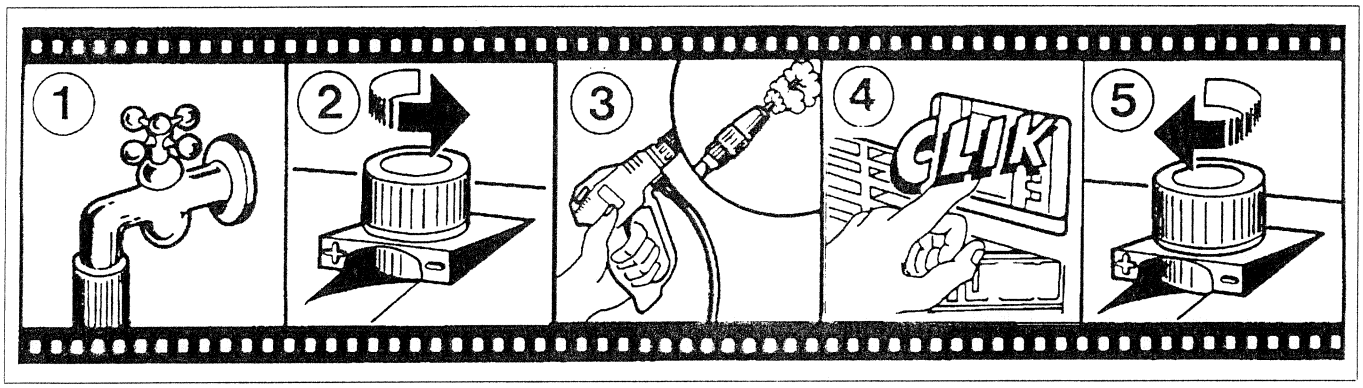




Connect water suction hose to the INLET connector. We recommend the use of a reinforced suction hose with internal diameter not less than 1/2 inch.

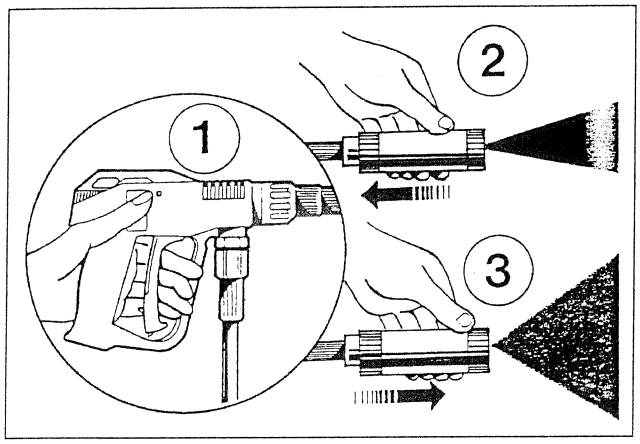


After checking that the primary voltage is the same as shown on the motor label, you may proceed to plug the unit in.

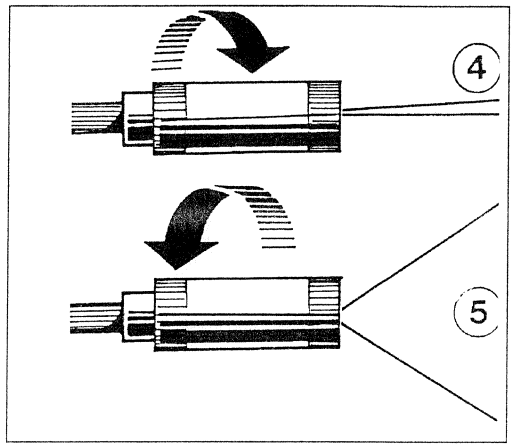


1. Now you can turn on the water.
2. Set the pressure to zero by turning the knob counterclockwise.
3. Hold the gun in the open position for a few seconds to allow the air to escape from the hoses.
4. Switch on the unit.
5. At this point adjust the machine to your pressure requirement (up to 1000 PSI) and you are ready to do your work.

HOW TO USE THE MULTIREG

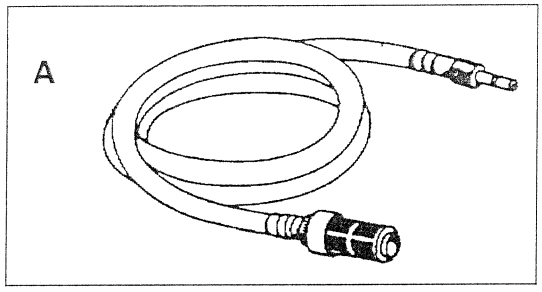


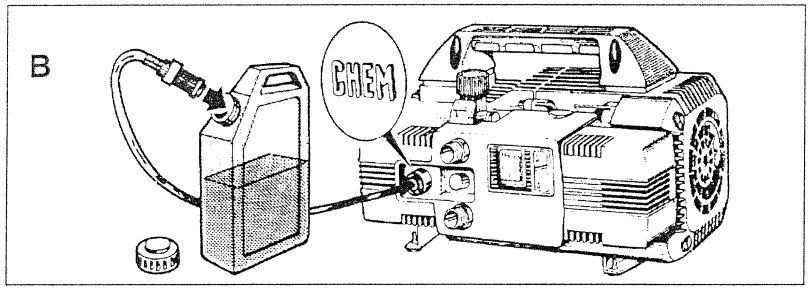
A. Selection of high or low pressure by push-pull action. The selection of the pressure must be carried out with the gun in closed position (1).



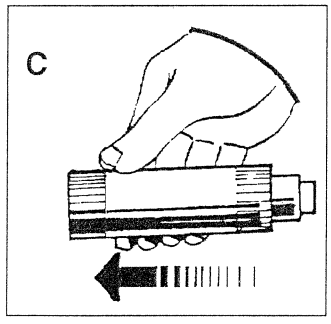
B. Adjustment from straight (4) to fan (5) of water jet by simple turning of the **MULTIREG**.

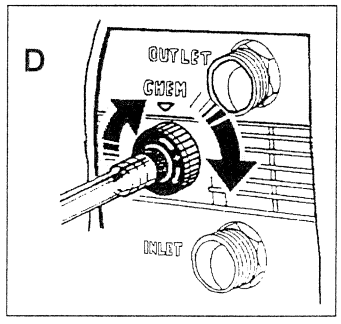
HOW TO USE THE CHEMICAL INJECTOR





1. The unit can suck and mix detergents and other liquid chemicals thanks to an automatic device incorporated in the unit itself, which is remote controlled by operating the **MULTIREG**. The unit is equipped with a chemical suction kit (Figure A).
2. Fit the brass connector into the chemical control knob and filter into chemical container (Figure B).
3. Select low pressure with the **MULTIREG** (**Figure C**). At this point the suction and mixing of the chemical will start automatically.
4. You can regulate the quantity of chemicals by adjusting the chemical control knob (Figure D).
5. When you wish to stop using chemicals in order to clean or rinse, simply release the gun trigger and adjust the **MULTIREG** to high pressure. At this point the chemical injection stops.
6. If you foresee not using the unit for a long period of time, we suggest to clean the chemical suction kit with clear water to avoid chemical deposit build-up.
7. If you run out of chemical, the unit will suck air causing loss of pressure. Refill chemical container.



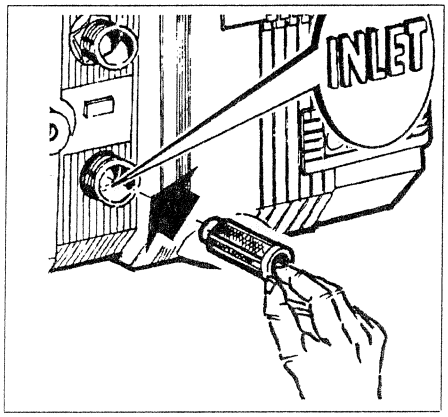


CHECKING AND CHANGING THE OIL

1. The level of the oil must be checked periodically.
2. The first important oil change must be carried out after the first 20 hours of work and successively every 150 hours.
3. In any case we suggest an oil change once a year.

Oil type: SAE 20/30. Capacity: 11 fl. oz.

CHECKING THE WATER FILTER



It is important to periodically check and clean the water filter in order to avoid restricting the water flow due to deposits in the filter screen. Remember that a well-cleaned filter means good performance and long life of the unit.

PRECAUTIONS AGAINST FREEZING

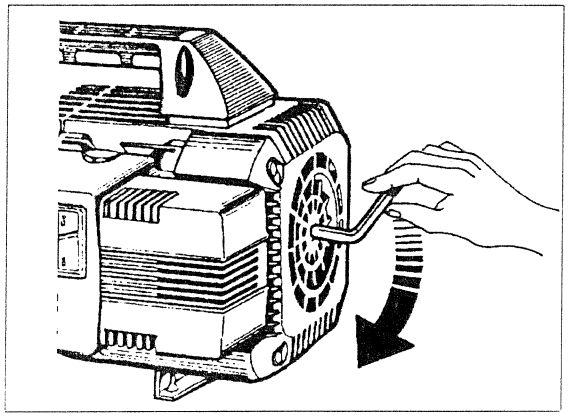
If the unit is to be stored in a place where there is risk of freezing, we suggest feeding some antifreeze into the pump, similar to that used in your car.

In any case, at very low temperatures if in doubt that some parts of the unit may be frozen or if the unit has been in storage for a long time, before plugging in, we suggest turning the motor shaft with the hex key supplied.

This operation determines if the unit is frozen or blocked due to lime scale deposits.

By taking these precautions before starting, you will avoid damaging the unit.

Remove the hex key before switching on motor.



TROUBLESHOOTING GUIDE

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
Pump running normally but pressure is low.	Pump sucking air.	Check that hoses and fittings are air tight and chemical container full.
	Valves worn or dirty.	Check, clean or replace.
	Unloader valve seat faulty or worn.	Check and replace.
	Nozzle incorrect or worn.	Check and replace.
	Worn piston packing.	Check and replace.
Fluctuating pressure.	Valves worn, dirty or stuck.	Check, clean or replace.
	Pump sucking air.	Check that hoses and fittings are air tight and chemical container full.
	Worn piston packing.	Check and replace.
Pressure drops after period of normal use.	Nozzle worn.	Check and replace.
	Valves worn, dirty or stuck.	Check, clean or replace.
	Unloader valve seat worn or dirty.	Check, clean or replace.
	Worn piston packing.	Check and replace.
Pump noisy.	Pump sucking air.	Check that hoses and fittings are air tight and chemical container full.
	Valves worn, dirty or stuck.	Check, clean or replace.
	Worn bearings.	Check and replace if necessary.
	Water too hot.	Reduce temperature below 140°F.
Presence of water in oil.	High humidity in air.	Check and change oil twice as often.
	Piston packing and oil seal worn.	Check and replace.
Water dripping from under pump.	Piston packing worn.	Check and replace.
	The o-rings of piston guide or retainer worn.	Check and replace.
Oil dripping.	Oil seal worn.	Check and replace.
The motor does not start when switched on.	The plug not well connected or lack of power supply.	Check plug, cable and switch.
When switching on the unit, the motor hums but does not run.	The voltage is insufficient.	Check that the power supply is adequate. Start with trigger gun in open position.
	The pump is stuck or frozen.	Check by turning the motor manually as described in instructions.
The motor stops.	Tripped thermal overload due to overheating.	Check that the voltage is correct. Wait a few minutes before turning on the unit again.

IMPORTANT

If the pressure washer demonstrates other symptoms or the corrective actions listed do not correct the problem, contact the local, authorized **Bowman Distribution** Service Center. The **Bowman Distribution Service Center** can be identified by contacting: **Customer Service Department at Bowman Distribution, 1-800-821-6490.**

Instructions de sécurité importantes

Ce livret contient des informations importantes pour l'usage et le fonctionnement de cette machine sans risque de danger. Lisez et assimilez tous les avertissements avant de commencer à travailler.

Avertissement -- Lors de l'usage de cette machine

- Vérifiez les tuyaux, le pistolet à déclic et les autres parties composantes avant l'usage. Remplacez-les si vous remarquez des signes d'usure, de craquage, ou de desserement.
- Assurez-vous que tous les boutons électriques soient éteints avant de brancher la machine.
- Lisez toutes les instructions avant d'utiliser cette machine.
- Afin de réduire tout risque de blessure, il est nécéssaire de prendre des précautions lors de l'usage de cette machine en proximité des enfants.
- Ne pointez pas la lance vers vous ou vers une autre personne. Des blessures corporelles pourraient résulter de l'eau sous haute pression.
- Sachez comment arrêter la machine et comment réduire rapidement la pression. Soyez bien familier avec les boutons de réglages.
- Portez une protection pour les yeux, les mains, les pieds et la peau.
- Soyez vigilant. Faites attention à ce que vous faites.
- Ne faites pas fonctionner la machine si vous êtes fatigué ou si vous êtes sous l'influence de l'alcool ou de drogues.
- Ne bloquez pas ou ne nouez pas la gâchette dans une position ouverte.
- Maintenez la zone de fonctionnement libre de toutes personnes. La zone de nettoyage devrait être pourvue de pentes convenables et de drainage afin d'éviter de glisser.
- N'essayez pas d'atteindre trop loin et ne vous mettez pas debout sur un appui instable. Gardez une bonne prise de pied et maintenez votre équilibre à tout moment.
- Suivez les instrutions d'entretien specifiées dans le manuel. Soyez sûr de débrancher avant d'exécuter une opération d'entretien.
- Lisez attentivement les instructions concernant la mise à la terre et les rallonges. Utilisez seulement des fils électriques et des prises de courant de granduer juste approuvés par les United Laboratories (UL).
- Afin d'éliminer tout risque d'incendie, n'utilisez pas près de produits inflammables tel que l'essence, la poussière de grain, des dissolvants ou des diluants.
- Utilisez seulement un concentré de nettoyage recommendé par le fabriquant de produits chimiques. Suivez les instructions inclues avec le détersif.

AVERTISSEMENT -- RISQUE D'INJECTION OU DE BLESSURE. NE DIRIGEZ PAS LE JET VERS DES PERSONNES. GARDEZ CES INSTRUCTIONS.

FRANCAIS

NOUS VOUS FÉLICITONS du choix que vous avez fait, qui est le témoin de vos connaissances techniques et de votre amour pour les belles choses.
Vous avez en effet acheté un appareil de très haute technologie, fabriqué par le plus grand constructeur mondial de pompes haute pression.
C'est une machine professionnelle, permettant de nombreuses applications, qui vous servira longtemps.
Cependant **nous vous prions de lire et de suivre scrupuleusement les instructions qui suivent.**

CARACTERISTIQUES TECHNIQUES

MODÈLE BW200

Débit 2.1 G.P.M.
(USA)

Impact équivalent du jet avec buse ROTOX P.S.I. 2000 — E.W. bar: pression spécifique du jet, en Kg/cm² ou P.S.I.

Pression maxi de service avec:
- Buse standard P.S.I. 1000
- MULTIREG bar 70

Surpression admissible P.S.I. 1450

Puissance moteur monophasé
kW. 1.58
V. 115
Hz. 60
A. 15

Protection moteur Thermique ampèremétrique

Degré d'étanchéité IP55

Tempér. maxi d'eau d'alimentation 140°F

Profondeur maxi d'aspiration 3.3 ft.

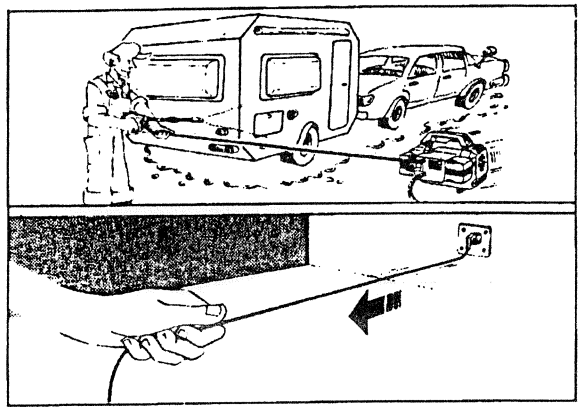
Longueur du tuyau 26 ft.

Poids 45 LBS.

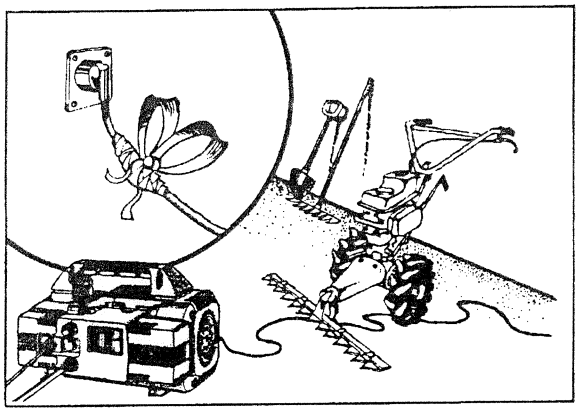
Dimensions mm. 360 × 240 × 235
inches 14.2 × 9.4 × 9.2

PRECAUTIONS D'EMPLOI

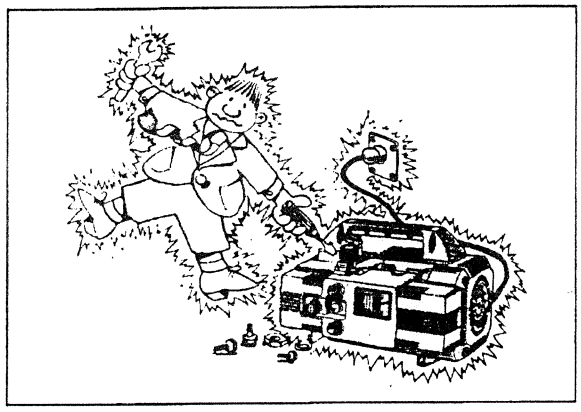
L'appareil ne doit pas fonctionner sans eau. En cas de fonctionnement sans eau le système d'étanchéité serait endommagé.



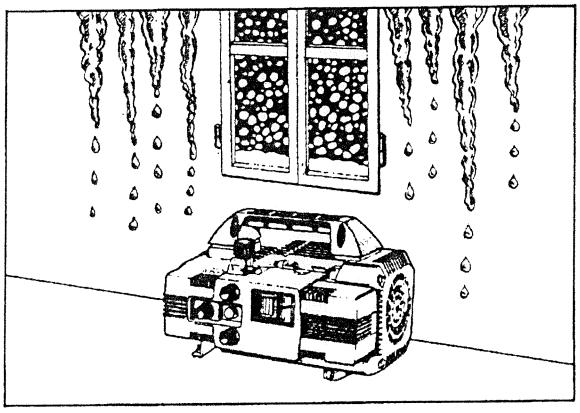
Pour débrancher l'appareil ne tirez pas sur le câble électrique. En déplaçant l'appareil ne tirez pas sur le tuyau.



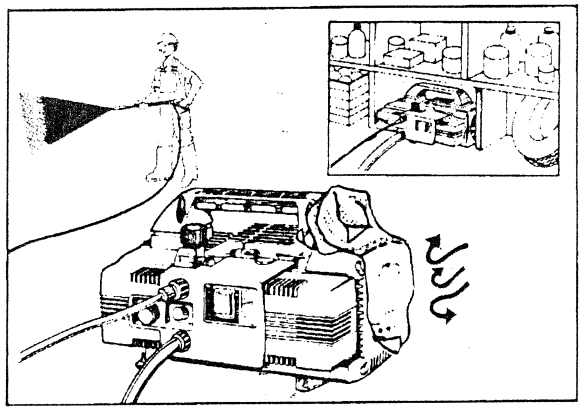
N'effectuez pas de réparations précaires sur le câble électrique et faites attention de ne pas l'écraser ou endommager.



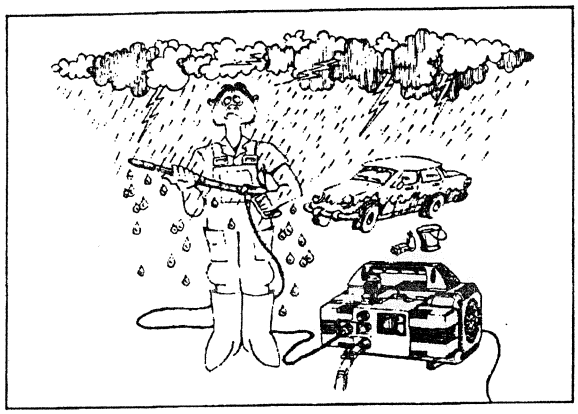
Débranchez l'appareil avant toute intervention d'entretien.



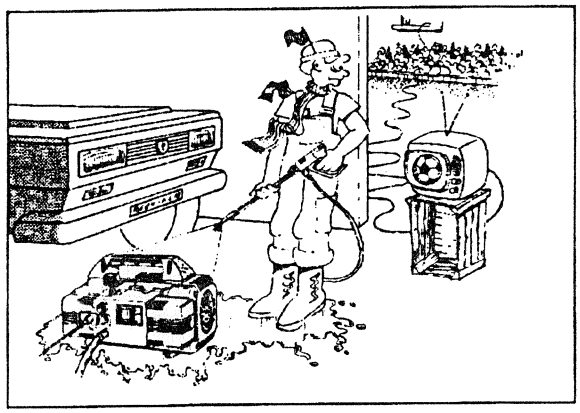
N'exposez pas l'appareil à des très basses températures, dans des endroits avec risque de gel.



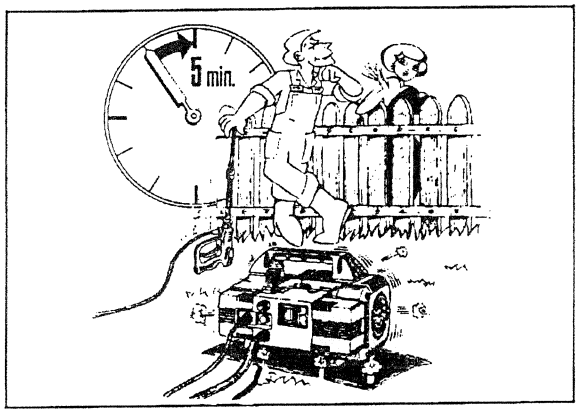
En fonctionnement, ne recouvrez pas l'appareil ou ne le placez pas dans un endroit avec ventilation insuffisante.



N'utilisez pas l'appareil sous la pluie ou en cas d'orage.

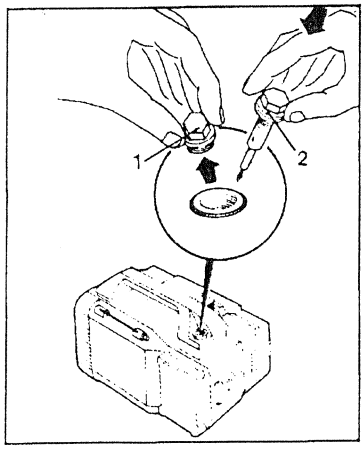


N'orientez pas le jet sur l'appareil ou sur tout appareillage électrique.

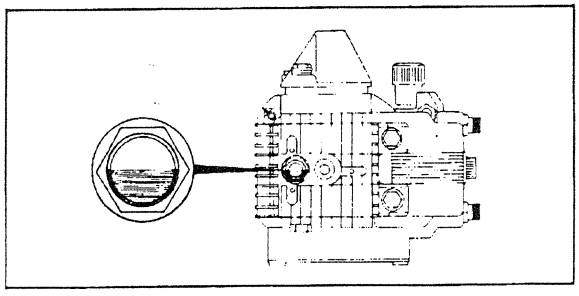


Ne laissez pas fonctionner l'appareil plus de 5 minutes avec la poignée pistolet en position fermée. Au delà de cette période, arrêtez l'appareil afin d'éviter un échauffement de la pompe, qui peut endommager les systèmes d'étanchéité.

INSTALLATION

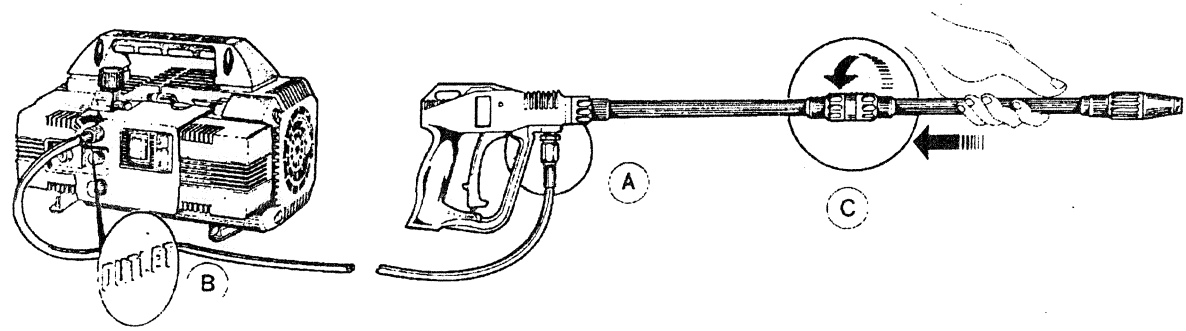


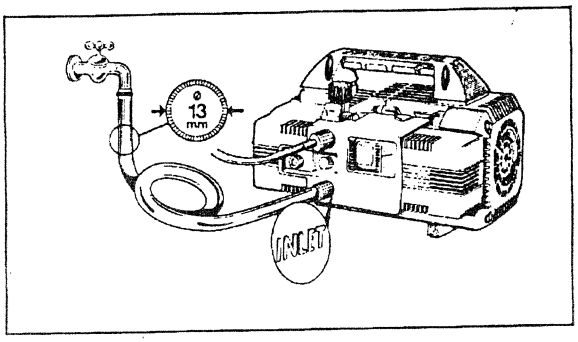
Remplacez le bouchon rouge de voyage (1), par la jauge noire et jaune que vous trouverez dans l'emballage (2).



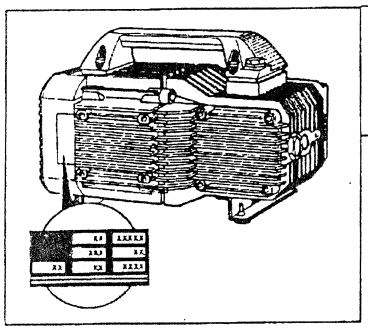
Contrôlez que le niveau d'huile soit au milieu du voyant.

Raccordez le fléxible haute pression au pistolet (A) et à la sortie haute pression (OUTLET) de la pompe (B)
Emboîtez les deux parties de lance et vissez à fond (C).

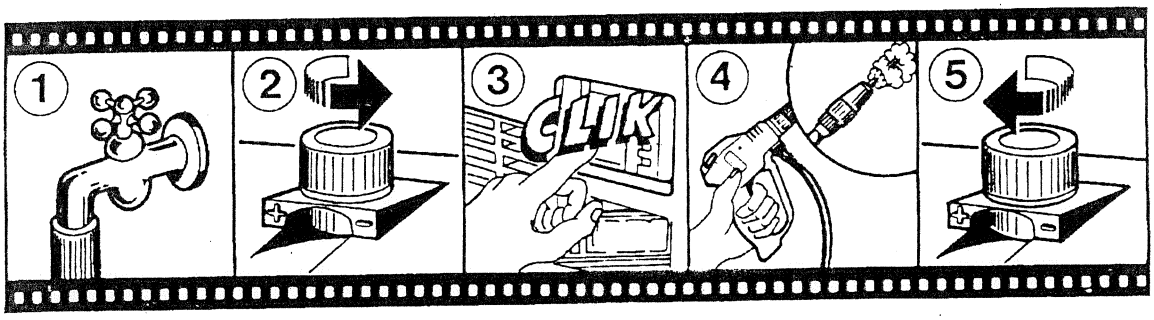




Emmanchez le tuyau d'arrivée d'eau sur le raccord (INLET).
Utilisez un tuyau renforcé ayant un diamètre intérieur min. de 13 mm.



Après avoir contrôlé que les caractéristiques électriques du secteur (Volt/Hz) correspondent à celles indiquées sur l'appareil, vous pouvez le brancher.

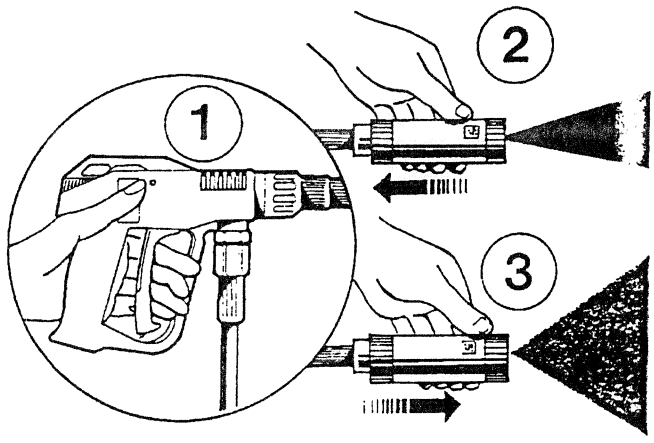


— Maintenant vous pouvez ouvrir votre robinet d'eau (1).
— Amenez le bouton de réglage pression sur la position "0" (zéro) (2).
— Appuyez sur l'interrupteur (3).
— Tirez sur la gachette du pistolet quelques secondes afin d'évacuer l'air du tuyau (4).
— A ce moment vous pouvez régler la pression à votre besoin (5).

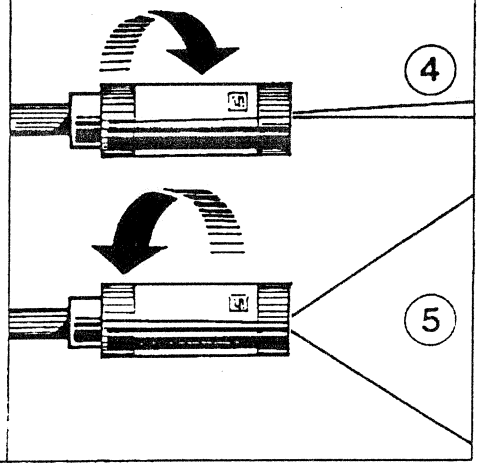
Bon Nettoyage!

COMMENT UTILISER LE "ROTOX" (OU LE "MULTIREG")

A) Sélection de la haute et basse pression.
La sélection de la pression doit être effectuée quand le pistolet est relâché (1).



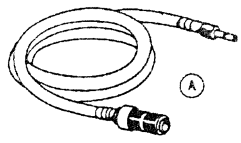
B) Réglage de l'angle du jet en tournant le **MULTIREG** (4) - (5).

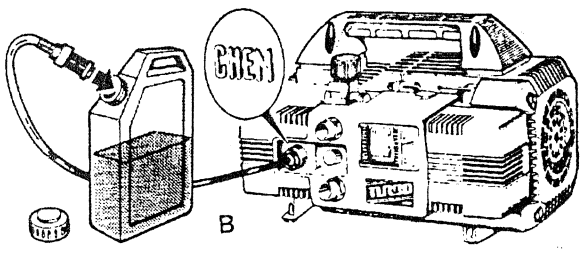


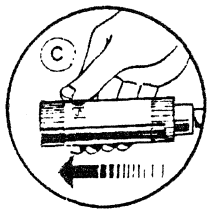
COMMENT UTILISER LE SYSTEME DE DETERGENT

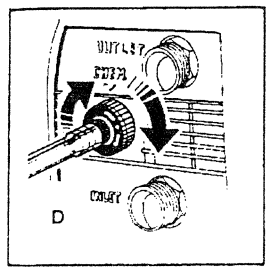
L'appareil peut aspirer et mélanger des détergents et d'autres additifs liquides grâce à un dispositif automatique intégré dans la machine et actionné à distance en agissant sur le **MULTIREG**

— Vous trouverez dans l'emballage un Kit d'aspiration du détergent (FIG. A).







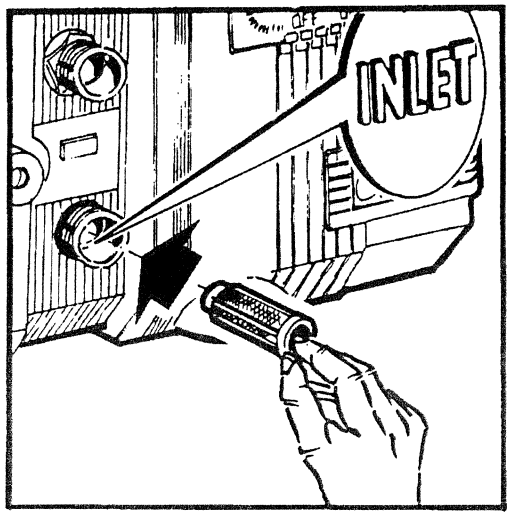


— Emmancher le raccord en laiton dans la molette de dosage et plonger la crépine dans le détergent (FIG. B).
— Mettre le **MULTIREG** sur la position Basse Pression (FIG. C). À ce moment, lorsque vous appuyez sur la gâchette, le détergent sera aspiré et mélangé automatiquement à l'eau.
— Vous pouvez augmenter ou diminuer la quantité du détergent en tournant la molette de dosage (FIG. D).
— Quand vous voulez arrêter le détergent pour rincer/nettoyer, relâchez la gachette, agissez simplement sur le **MULTIREG** en l'amenant sur la position Haute Pression; à ce moment l'aspiration du détergent s'arrête automatiquement.
— En cas d'inutilisation prolongée de l'appareil, il est souhaitable de rincer le système d'aspiration du détergent afin d'éviter des dépôts de produits chimiques.

CONTROLE ET VIDANGE DE L'HUILE

— Le niveau d'huile doit être contrôlé périodiquement.
— La première vidange, qui est très importante, doit absolument être faite après les premières 20 heures de fonctionnement, ensuite, toutes les 150 heures de fonctionnement.
— Dans tous les cas nous conseillons une vidange au moins une fois par an.
— Type d'huile: SAE 20/30.
— Contenance: 0,33 l.

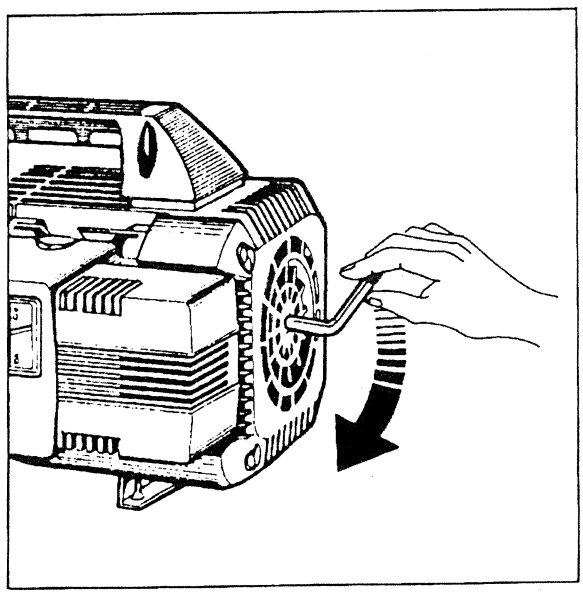
CONTROLE DU FILTRE D'EAU



Il est très important de contrôler périodiquement la propreté du filtre d'arrivée d'eau et de le débarrasser des impurités qui s'y sont déposées.
Souvenez-vous qu'un filtre propre garantit une bonne performance et une longévité à votre appareil.

PRECAUTIONS CONTRE LE GEL

Si pendant l'hiver l'appareil risque d'être exposé au gel, nous vous conseillons de lui faire aspirer préalablement un liquide antigel, comme celui utilisé pour la voiture.
En tout cas, par des températures très basses et si vous pensez que quelques parties de l'appareil puissent être gelées, ou si l'appareil n'a pas été utilisé pendant longtemps, **nous vous suggérons,** avant le démarrage, de faire tourner manuellement l'axe du moteur par la clé livrée avec.
Cette operation vous permet de vérifier si l'appareil est gelé ou bloqué par des dépôts de calcaire.
En prenant ces précautions, vous éviterez d'endommager l'appareil.
Souvenez-vous d'enlever la clé avant le démarrage de la machine.



INCONVENIENTS ET REMEDES

INCIDENTS	CAUSES	REMEDES
La pompe marche mais ne donne pas la pression maxi.	La pompe aspire de l'air	Contrôler que le tuyau d'arrivée d'eau est étanche
	Les clapets sont usés, sales ou bloqués	Contrôler, nettoyer ou remplacer
	Le siège de la valve de régulation est usé ou sale	Contrôler, nettoyer ou remplacer
	Buse incorrecte ou usée	Contrôler ou remplacer
	Garnitures usées	Contrôler - remplacer
Oscillation de la pression	Les clapets sont usés, sales ou bloqués	Contrôler, nettoyer ou remplacer
	La pompe aspire de l'air	Contrôler que le tuyau d'arrivée d'eau est étanche
	Garnitures usées	Contrôler - remplacer
Perte de pression	Buse usée	Remplacer
	Les clapets sont usés, sales ou bloqués	Contrôler, nettoyer ou remplacer
	Le siège de la valve de regulation est usé ou bloqué	Contrôler, nettoyer ou remplacer
	Garnitures usées	Contrôler - remplacer
Pompe bruyante	La pompe aspire de l'air	Contrôler que le tuyau d'arrivée d'eau est étanche
	Les clapets sont usés, sales ou bloqués	Contrôler, nettoyer ou remplacer
	Roulements usés	Remplacer
	Température trop élevée de l'eau	Baisser la température de l'eau
Presence d'eau dans l'huile	Système d'étancheité (eau - huile) usé	Contrôler ou remplacer
	Haut pourcentage d'humidité dans l'air	Doubler la fréquence des vidanges d'huile
Fuite d'eau entre culasse et carter	Système d'étanchéité usé	Contrôler - remplacer
En appuyant sur l'interrupteur le moteur ronfle, mais ne démarre pas	La tension d'alimentation secteur est insuffisante	Contrôler le réseau électrique
	La pompe est bloquée ou gélée	Faire tourner le moteur manuellement, suivant les instructions
	La section du câble de rallonge est insuffisante	Consulter le tableau pour l'utilisation correcte de la rallonge
En appuyant sur l'interrupteur le moteur ne démarre pas	La prise est mal branchée	Contrôler prise, cable et interrupteur
	Pas d'arrivée de courant	
Le moteur s'arrête	La protection thermique est intervenue à cause d'un échauffement	Contrôler que la tension d'alimentation corresponde à celle prescrite. attendre quelques minutes avant de remettre en service l'appareil

Instrucciones De Seguridad Importantes

Este libro contiene informacíon importante acerca del uso y manejo seguro de esta máquina. Lea y entienda todas las advertencias antes de empezar a trabajar.

Advertencias - Cuando La Maquina Esta En Uso

- Revise mangueras, mecanismo o pistola para aplicar presión y herrajes/accesorios antes de arrancar. Cambie si ve señas de desgaste, agrietamiento o flojedad.
- Asegúrese de que los interruptores/ suiches estén apagados antes de conectar.
- Lea todas las instrucciones antes de usar la máquina.
- Para reducir el riesgo de heridas, supervisión cuidadosa es necesaria cuando se usa la máquina cerca de niños.
- No apunte a nadie o a usted mismo con el tubo de aplicar el agua o con la pistola a presión. Heridas personales pueden resultar cuando se usa agua a alta presión.
- Sepa como parar la máquina y como rebajar la presión rápidamente. Familiarícese con todos los controles.
- Use protección para los ojos, manos, pies y la piel mientras maneje este equipo.
- ¡Manténgase alerta! Ponga atención a lo que está haciendo.
- No maneje esta máquina cuando este fatigado o bajo la influencia de alcohol o drogas.
- No bloque o amarre/fije la pistola a presión cuando esté en posición abierta.
- Mantenga el área de trabajo libre de todas las persona. Áreas le limpieza deben estar provistas con inclinación y sistema de dresagüe adecuado para prevenir deslizamiento.
- No trate alcanzar o pararse en soportes inestables. Mantenga sus pies apoyados firmemente y mantenga balance todo el tiempo.
- Siga las instrucciones de mantenimiento especificadas en este manual. Esté seguro de desconectar la electricidad/el sistema de suministro de energía antes de hacer cualquier operación de mantenimiento.
- Cuidadosamente lea instrucciones acerca de conexión a tierra y cuerdas de extensión. Use solamente cuerdas aprobadas por UL y toma corrientes del tamaño apropiado.
- Para prevenir peligro de incendio, no use con o cerca de materiales inflamables tales como gasolina, grano fino, solventes y diluyentes. Solamente use un limpiador concentrado recomendado por el fabricante del producto químico. Siga las instrucciones dadas con el detergente.

ADVERTENCIA - RIESGO DE INYECCION O HERIDA NO DIRIJA EL CHORRO DE DESCARGA HACIA PERSONAS - GUARDE ESTAS INSTRUCCIONES

ESPAÑOL

NOS CONGRATULAMOS CON USTED por su elección que testimonia su nivel de conocimientos tècnicos y su amor por las cosas bellas. **De hecho usted ha comprado un aparato de alta tecnologia realizado por el mas grande constructor del mundo en bombas de alta presión.** Se trata de una máquina profesional, versatil, elástica que usted utilizará por mucho tiempo. Por lo tanto **le rogamos que lea con detenimiento y respete todo cuanto está contenido en el presente manual de instrucciones.**

DATOS TECNICOS

MODELO **BW200**

Caudal **2.1 G.P.M.**
(USA)

Impacto equivalente del chorro de limpieza con boquilla ROTOX P.S.I. 2000

E.W. bar: presión especifica del chorro en Kg/cm² o P.S.I.

Presión max con:
- Boquillas standard P.S.I. **1000**
- MULTIREG bar **70**

Sobrepresión de servicio admisible **P.S.I. 1450**

Potencia de motor monofasico
kW. **1.58**
V. **115**
Hz. **60**
A. **15**

Protector motor **Amperimétrico térmico**

Protección del motor **IP55**

Temperatura max. de agua de alimentación **140°F**

Max. desnivel de aspiración **3.3 ft.**

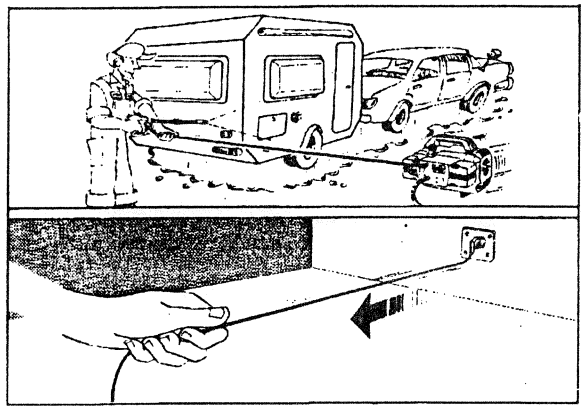
Largo del tubo **26 ft.**

Peso **45 LBS.**

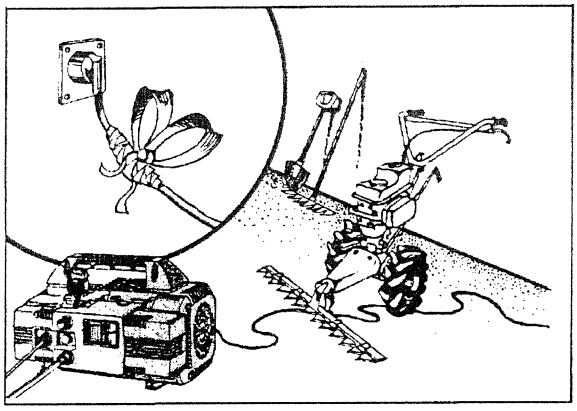
Dimensiones **mm. 360 x 240 x 235**
inches 14.2 x 9.4 x 9.2

RECOMENDACIONES IMPORTANTES

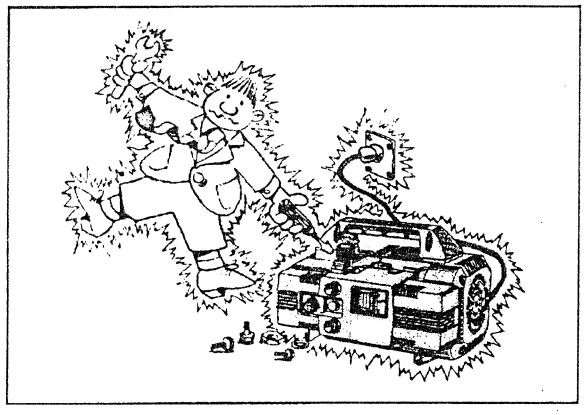
La máquina no debe trabajar sin agua, el funcionamiento sin agua produciria daños en el sistema de retenes.



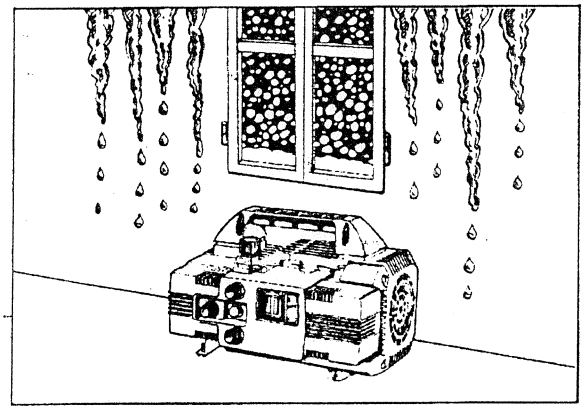
No desenchufar tirando del cable,no mover la maquina tirando tambien del cable.



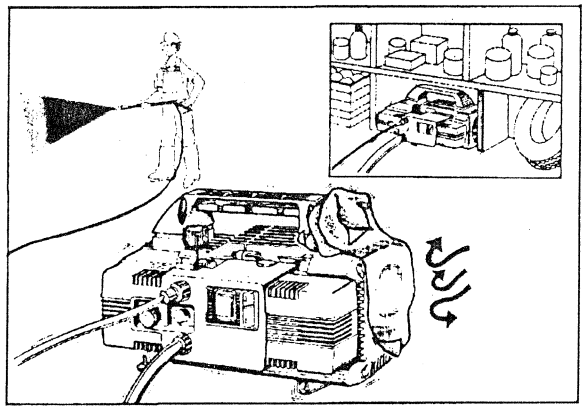
No efectuar reparaciones precarias al cable eléctrico y hacer atención a que no sea pisado.



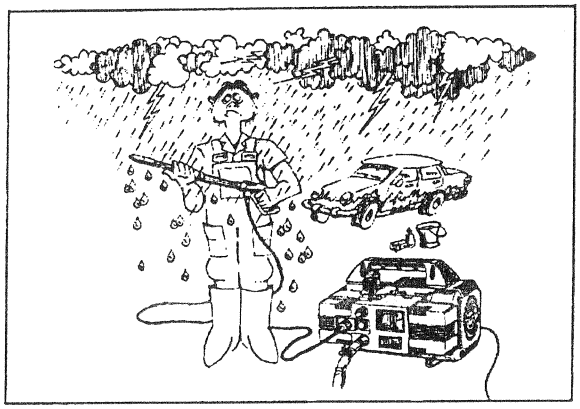
Antes de efectuar cualquier revisión o desmontar alguna parte de la máquina debe desenchufarse el cable eléctrico.



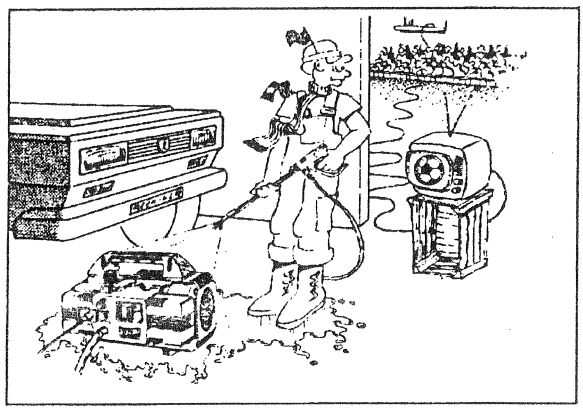
Evitar dejar la máquina expuesta a temperaturas muy bajas, donde existe el peligro de heladas.



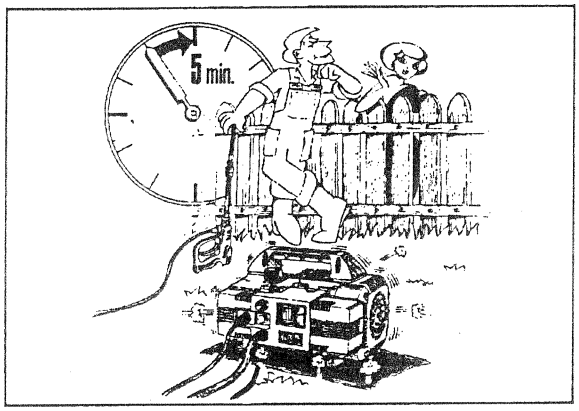
Durante el funcionamiento debe evitarse que la máquina esté cubierta o que trabaja en un lugar con ventilación insuficiente.



Evitar trabajar bajo la lluvia ò con temporal.

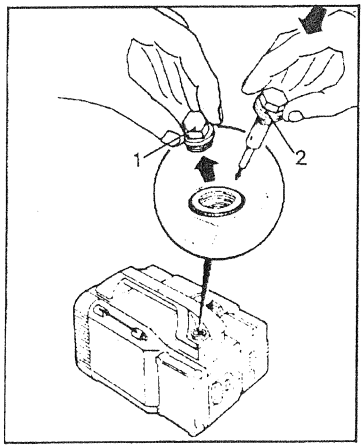


No dirigir nunca el chorro de agua hacia la máquina o hacia alguna parte con tensión eléctrica.

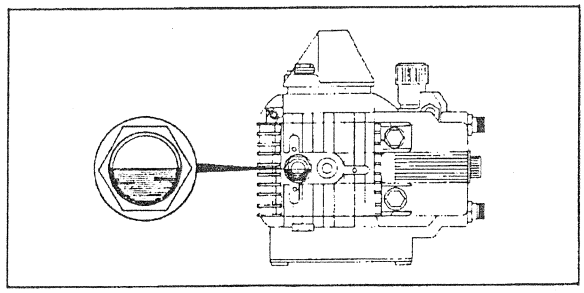


Es importante que la máquina no esté en funcionamiento con la pistola cerrada por mas de 5 minutos. Pasado este tiempo la temperatura del agua que circula dentro de la bomba aumenta repentinamente arriesgándose a producir daños en el sistema de retenes.

INSTALACIÓN

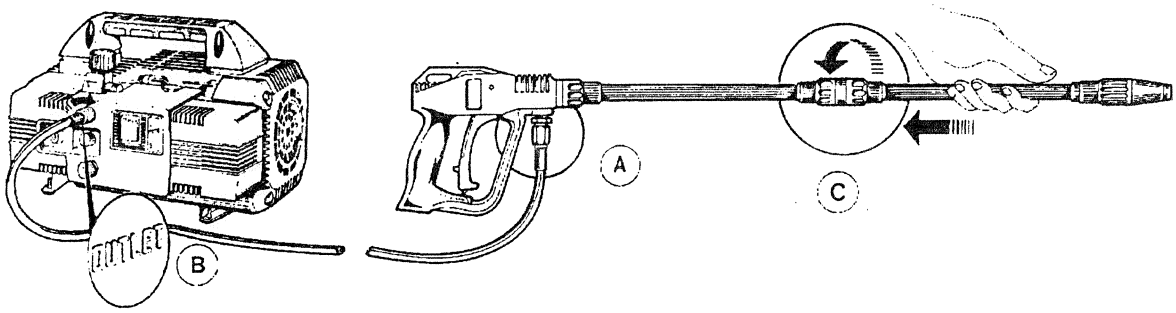


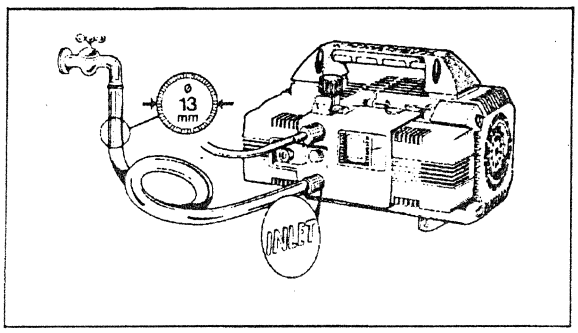
Sustituir el tapón de transporte de color rojo (1) por el tapón amarillo-negro (2) con varilla de control de aceite que encontrará en el embalaje.



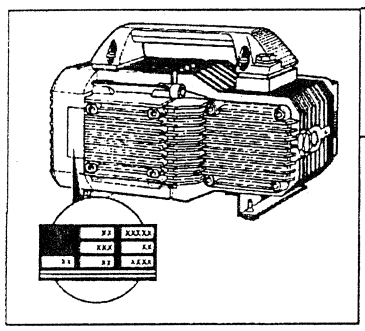
Controlar el nivel de aceite que debera encontrarse en el centro de la mirilla.

Conectar el tubo de alta presión por una extremidad a la pistola automática (A) y por la otra al racor de salida (OUTLET) apretando a fondo la tuerca de fijación (B).
Completar el ensamblaje de la lanza montando la parte superior sobre la parte fija y apretando cuidadosamente (C).

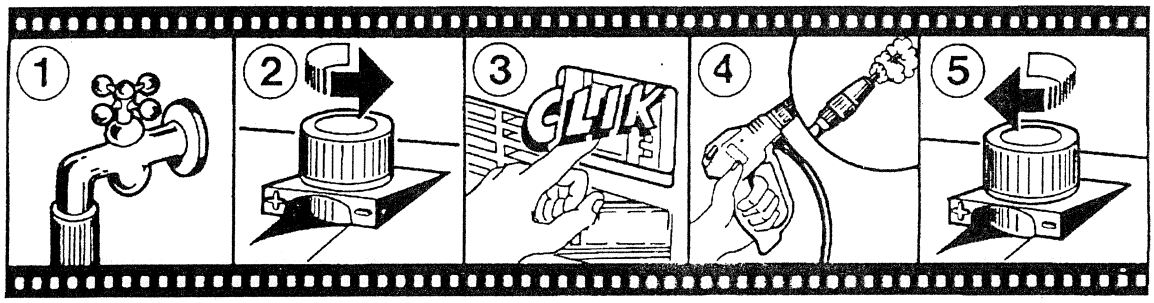




Conectar el tubo de alimentación del agua de la red al racor de entrada (INLET).
Utilizar un tubo reforzado con un diámetro min. interior de 13 milímetros.



Despues de haber controlado que las caracteristicas de la corriente de la toma electrica son las prescritas en la placa situada en la parte posterior de la maquina pueden conectar el enchufe

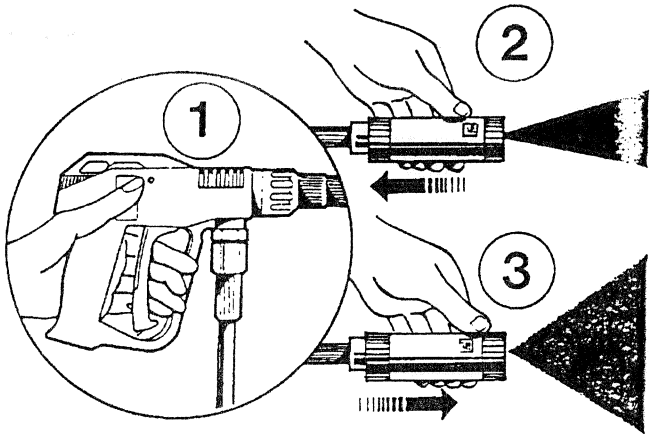


— Abrir la presión del agua (1).
— Poner a cero la presión girando completamente el mando de regulación en el sentido contrario a las agujas del reloj (2).
— Pulsar el interruptor de puesta en marcha (3).
— Abrir la pistola y mantenerla en esta posición por algunos segundos dando tiempo a que salga todo el aire del circuito (4).
— En este momento pueden regular a voluntad la presiòn de trabajo girando el mando de la presión en el sentido de las agujas del reloj (5).

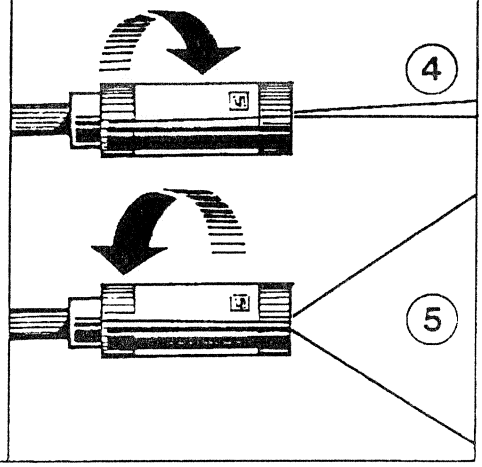
Buen trabajo!

UTILIZACIÓN DEL "ROTOX" (O DEL "MULTIREG")

A) Selección de baja y alta presión.
Esta selección de la presión debe efectuarse con la pistola cerrada (1).



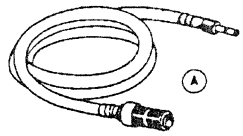
B) Regulación del chorro (4) - (5).

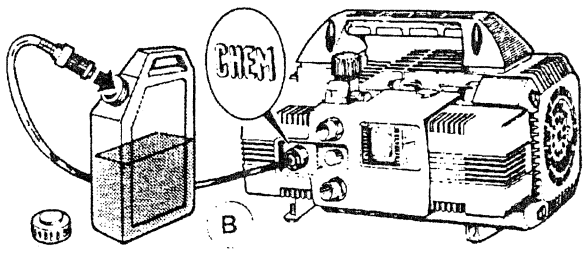


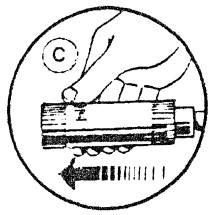
UTILIZACIÓN DEL INYECTOR DE PRODUCTOS QUÍMICOS

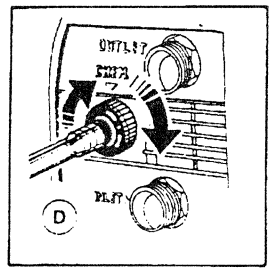
La máquina está preparada para aspirar y mezclar detergentes, gracias a un dispositivo automático incorporado, que puede ser accionado a distancia actuando sobre el **MULTIREG**

— La máquina viene equipada con un Kit de aspiración de detergente (FIG. A).







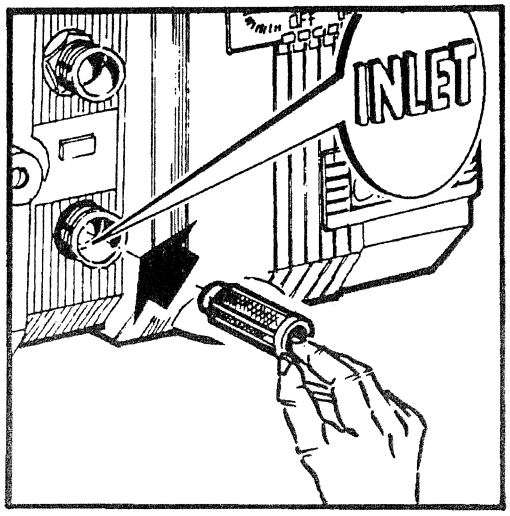


— Introducir el enchufe rápido en su alojamiento dentro del mando de regulación del detergente y la otra extremidad con el filtro, dentro del depósito de detergente (FIG. B).
— Seleccionar la baja presión actuando sobre el **MULTIREG** (FIG. C). El detergente será automáticamente aspirado y mezclado con el agua.
— Es posible regular la cantidad de detergente aspirado actuando sobre el mando de regulación (FIG. D).
— Cuando el usuario quiera cerrar el paso del detergente y pasar al lavado o aclarado solo con agua limpia, es suficiente que suelte el gatillo de la pistola, seleccione sobre el **MULTIREG** la alta presión y de esta manera el inyector de detergente quedará cerrado.
Con el fin de evitar que se formen depósitos o incrustaciones de producto químico en el Kit de aspiración de detergente, es aconsejable cuando se prevea un periodo de inactividad de la máquina, lavar el kit, haciendo aspirar agua limpia por algunos segundos.

CONTROL Y CAMBIO DE ACEITE

— El nivel de aceite debe ser controlado periodicamente.
— El primer y importante cambio de aceite debe efectuarse despues de las 20 primeras horas de trabajo y posteriormente cada 150 horas.
— Aconsejamos en cada caso un cambio de aceite por lo menos una vez al año.
— Tipo de aceite: SAE 20/30.
— Capacidad aceite: 0.33 l.

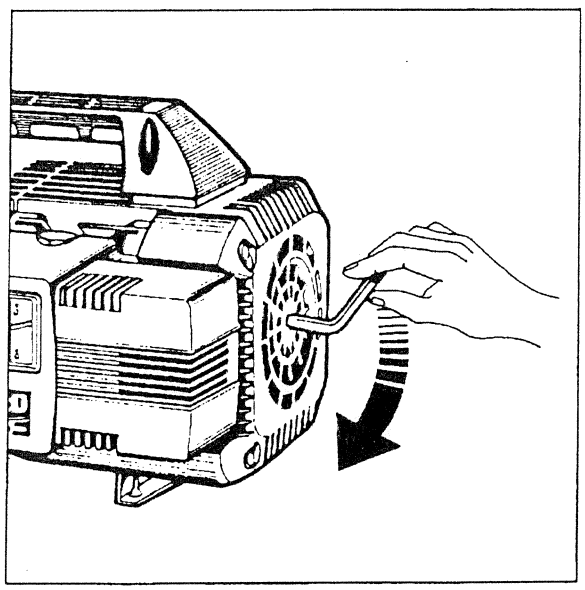
CONTROL DEL FILTRO DE ASPIRACIÓN



Es importante la inspección periódica del filtro de aspiración, para asegurarse que las incrustaciones no hayan comprometido su funcionalidad. Recuerde que un filtro bien limpio es la garantia del buen funcionamiento de la máquina.

PRECAUCIÓNES CONTRA LAS HELADAS

Si durante el invierno la máquina está expuesta al peligro de heladas, aconsejamos hacer aspirar un poco de mezcla anticongelante del mismo tipo que el usado en los automóviles.
En cualquier circunstancia, en presencia de temperaturas muy bajas y ante la duda de que alguna parte de la máquina pueda estar helada. ó si la máquina ha estado inactiva por un largo período, **aconsejamos** que antes de la puesta en marcha, hacer girar el eje de motor mediante la llave que se entrega con el equipo.
Esta operación permitirá verificar si la máquina ha sufrido una congelación o un bloqueo por incrustaciones, evitando dañarla al ponerla en marcha sin este control previo.
Recuerdanse extraer la llave antes de poner la máquina en marcha.



INCONVENIENTES Y REMEDIOS

INCONVENIENTES	CAUSAS	REMEDIOS
La bomba gira pero no alcanza la presión prescrita	La bomba aspira aire	Controlar la estanqueidad de los conductos
	Válvulas gastadas o sucias	Controlar-limpiar o cambiar
	Asiento válvula reguladora gastada o sucia	Controlar-limpiar o cambiar
	Boquilla no adecuada o gastada	Controlar y cambiar
	Juntas gastadas	Controlar y cambiar
Oscilaciones irregulares de presión	La bomba aspira aire	Controlar la estanqueidad de los conductos
	Válvulas gastada o sucias	Controlar-limpiar o cambiar
	Juntas gastadas	Controlar y cambiar
Caida de presión	Boquilla gastada	Controlar y cambiar
	Válvulas gastada o sucias	Controlar-limpiar o cambiar
	Asiento válvula reguladora gastada o sucia	Controlar-limpiar o cambiar
	Juntas gastadas	Controlar y cambiar
Ruido intenso	Cojinetes gastados	Controlar y cambiar
	La bomba aspira aire	Controlar la estanqueidad de los conductos
	Válvulas gastadas o sucias	Controlar-limpiar o cambiar
	Temperatura excesiva del agua	Bajar la temperatura del agua
Presencia de agua en el aceite	Retenes de aceite gastados	Controlar y cambiar
	Elevado porcentaje de humedad en el aire	Cambiar el aceite con frequencia doble a la normal
	Sistema de retenes de agua y aceite gastados.	Controlar y cambiar
Salida de agua entre carter y culata	Retenes gastados	Controlar y cambiar
	Juntas tóricas del sistema de retenes gastadas	Controlar y cambiar
Pérdita de aceite	Retenes de aceite gastados	Controlar y cambiar
Conectado el interruptor el motor ronca pero no gira	La tensión de la red es insuficiente	Controlar que el voltaje sea el correcto
	La bomba está bloqueada o congelada	Hacer girar manualmente el motor como indicado
	La sección del cable de prolongación es insuficiente	Consultar la tabla para el correcto uso de la prolongación
Conectando el interruptor el motor no gira	El enchufe no está bien colocado	Controlar el enchufe, el cable y el interruptor
	Falta corriente	
El motor se para	El protector térmico a entrado en función por recalientamento	Controlar que la tensión sea la prescrita.
		esperar algunos minutos antes de poner en marcha la máquina nuevamente

— SPARE PARTS KITS
— KITS DE PIECES DETACHEES
— KITS DE REPUESTOS

KIT N.	KIT 1	KIT 83	KIT 84	KIT 85	KIT 86	KIT 87
PARTS INCLUDED	70-71-72 73-74 (75) ◆	80 ★	68-69 ▼	63-64 65-66 67 ●	65-66 67 ■	63-64 66-67 ▲
N. pcs.	6	3	6	1 ✻	3	3

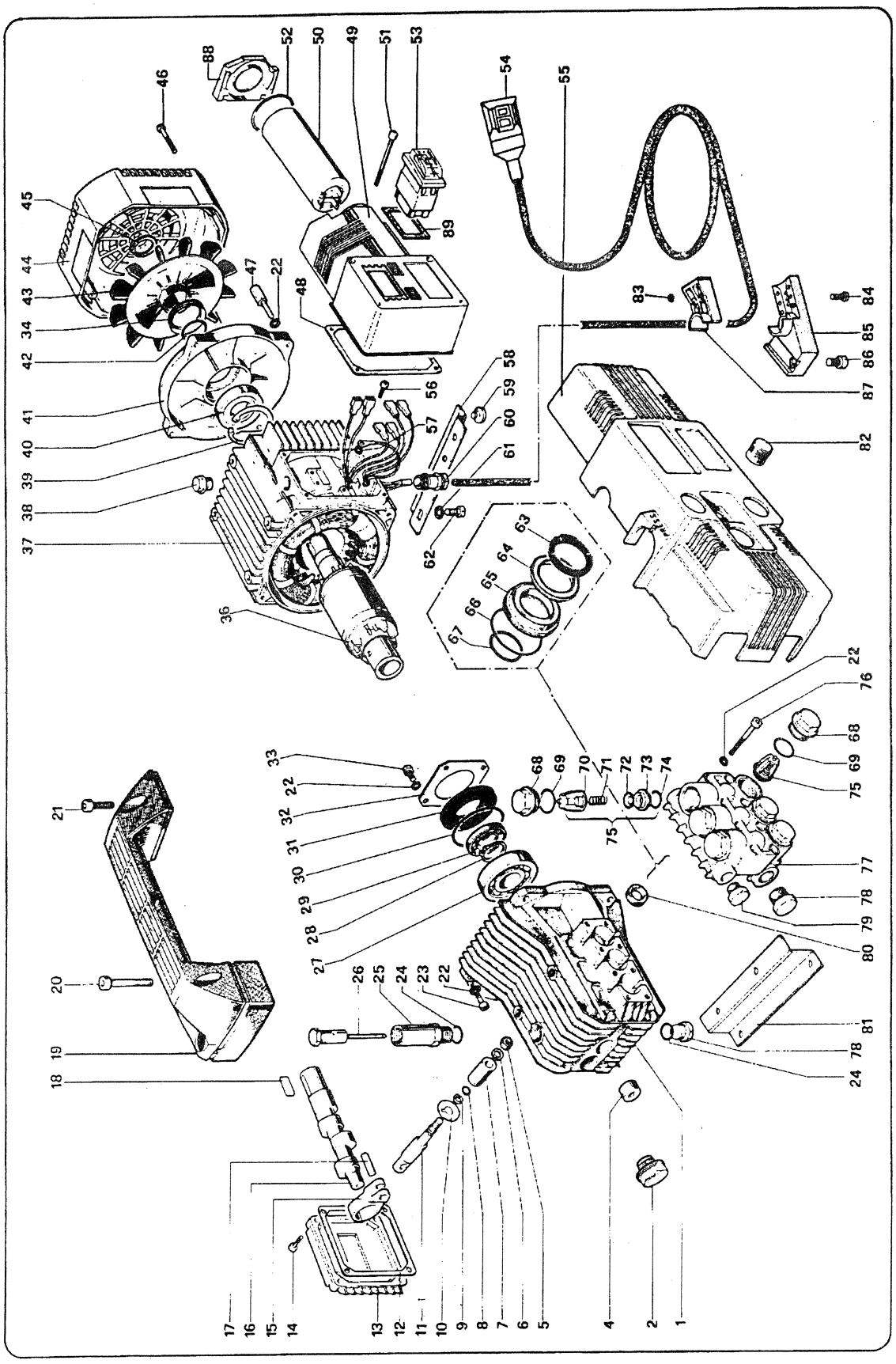
✻ THREE PER PUMP NEEDED

— LIST OF SPARE PARTS
— LISTE DE PIECES DETACHEES
— LISTA DE REPUESTOS

POS.	PART CODE	N. PCS.
1		1
2	97.5968.00	1
4		1
5	92.2216.00	3
6		3
7	51.0400.09	3
8	90.3572.00	3
9	90.5022.00	3
10		3
11		3
12		1
13		1
14		4
15		3
16		1
		1
17		3
18		1
19	51.2400.51	1
20	99.3144.00	2
21	99.3069.00	2
22	96.6938.00	20
23	99.1897.00	4
24	90.3833.00	2
25	51.2100.51	1
26	98.2097.00	1
27		1
28		1
29		1
30		1
31		1

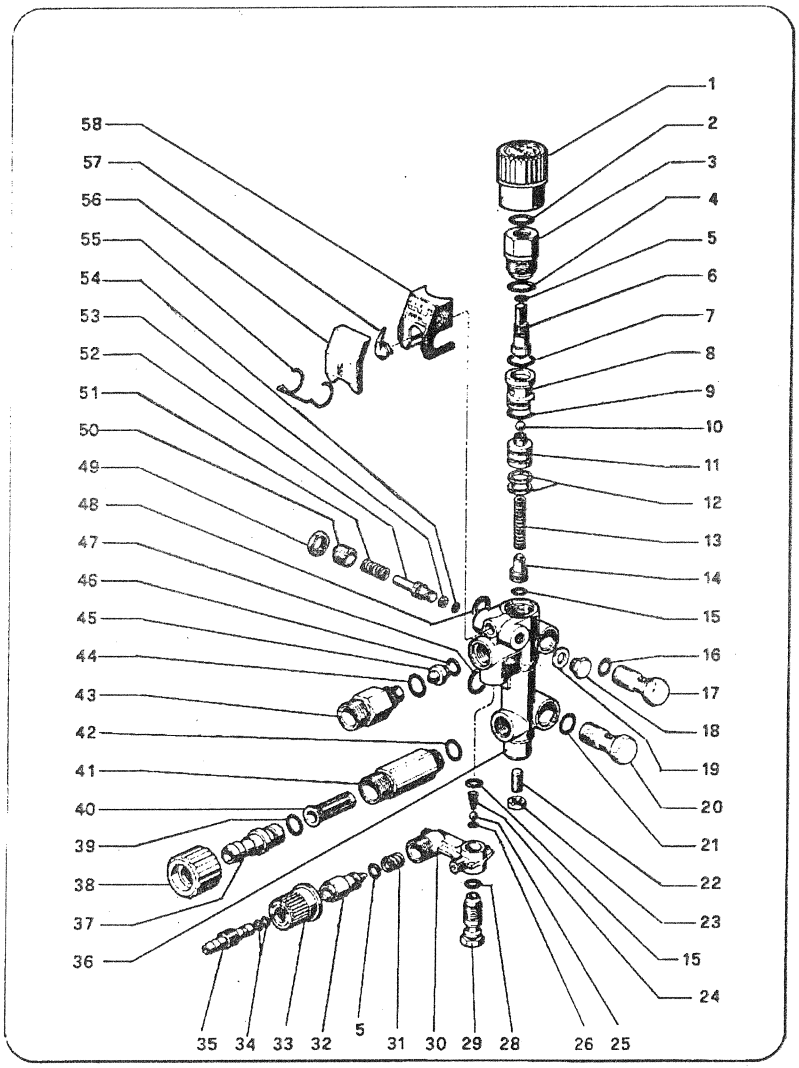
POS.	PART CODE	N. PCS.
32		1
33		4
34		1
36		1
		1
		1
37		1
		1
38		1
39		1
40		1
41		1
42		1
43	41.0300.51	1
44	41.0400.51	1
45		1
46	99.1658.00	4
47		4
48		1
49		1
50	93.5688.00	1
51	99.1705.00	4
52		1
53	93.5031.00	1
54	826245	1
55	51.2103.51	1
56		1
57		1
58		1
59	98.1924.00	4
60	93.5210.00	1

POS.	PART CODE	N. PCS.
61		4
62		4
63	● ▲	3
64	● ▲	3
65	● ■	3
66	● ■ ▲	3
67	● ■ ▲	3
68	▼	6
69	▼	6
70	◆	6
71	◆	6
72	◆	6
73	◆	6
74	◆	6
75	◆	6
76	99.1943.00	8
77	51.1200.22	1
		1
78		2
79		1
80	★	3
81		1
82	52.2122.51	1
83		2
84		2
85		1
86		1
87		1
88		1
89	41.2126.84	1



KIT N.	KIT 94	KIT 95 (KR)
PARTS INCLUDED	5-15-24-25-26-28 31-34-44-46	2-4-5-7-8-9-10-12 13-15-16-21-39-42 47-48-53-54
N. pcs	1	1

= KR



POS.	PART CODE	N. PCS.
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3		1
4		1
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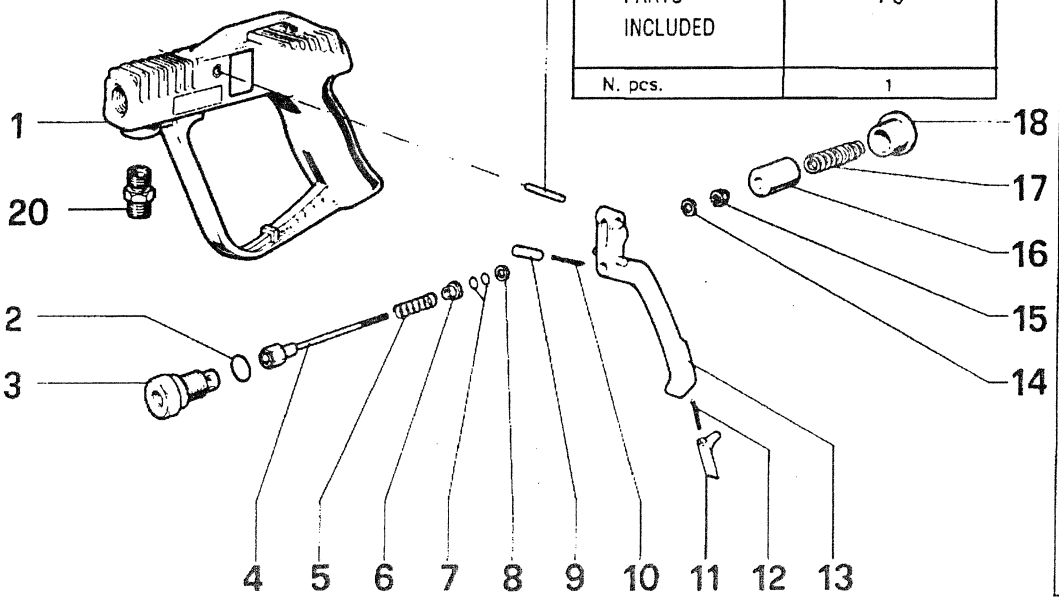
6		1
7		1
8		1
9		1
10		1
11		
12		2
13		1
14		1
15		2
16		1
17		1
18		1
19		1
20		1
21		1
22		1
23		1
24		1
25		1
26		1
28		1
29		1
30	36.2562.51	1
31	94.7383.00	1
32	36.2564.70	1
33	36.2565.51	1
34		2
35		1
36		1 1
37		1
38		1
39		1
40		1
41		1 1
42		1
43		1
44		1
45		
46		1
47		1
48		1
49		1
50		1
51		1
52		1 1
53		1 1
54		1 1
55	94.8718.00	1
56	36.2577.51	1
57	36.2578.51	1
58		1 1

ZP 10

KIT N.	KIT 105
PARTS INCLUDED	2-3-4 7-8
N. pcs.	1



POS.	N. PCS.
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2	1
3	1
4	1
5	1
6	1
7	2
8	1
9	1
10	1
11	1
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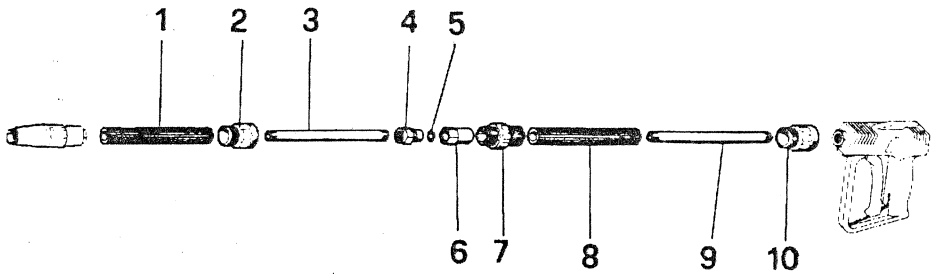
14	1
15	1
16	1
17	1
18	1
19	1
20	1

ZOZ QUIK 2



ZOZ FIXUP

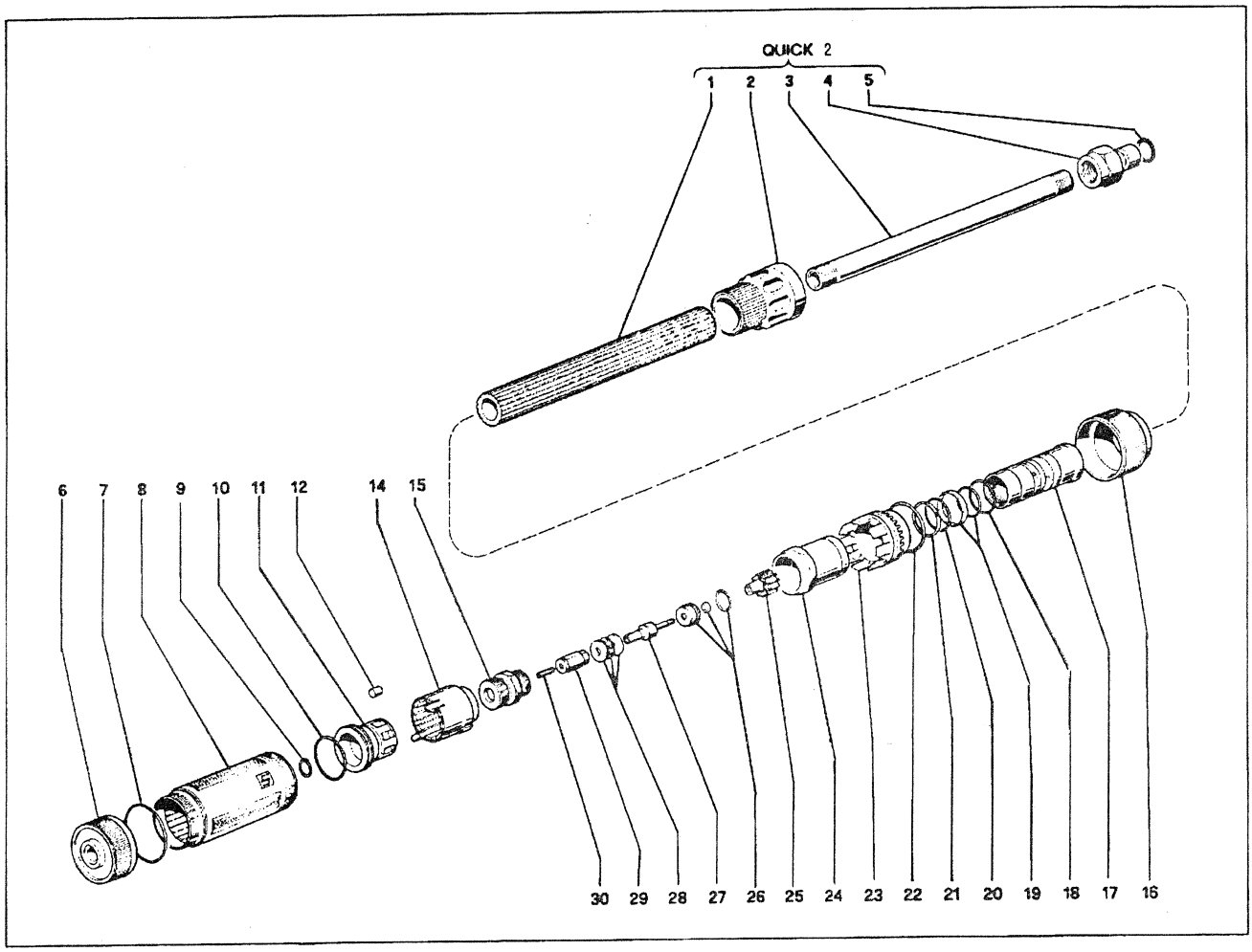
ZOZ QUIK 2

POS.	N. PCS.
1	1
2	1
3	1
4	1
5	1

ZOZ FIXUP

POS.	N. PCS.
6	1
7	1
8	1
9	1
10	1

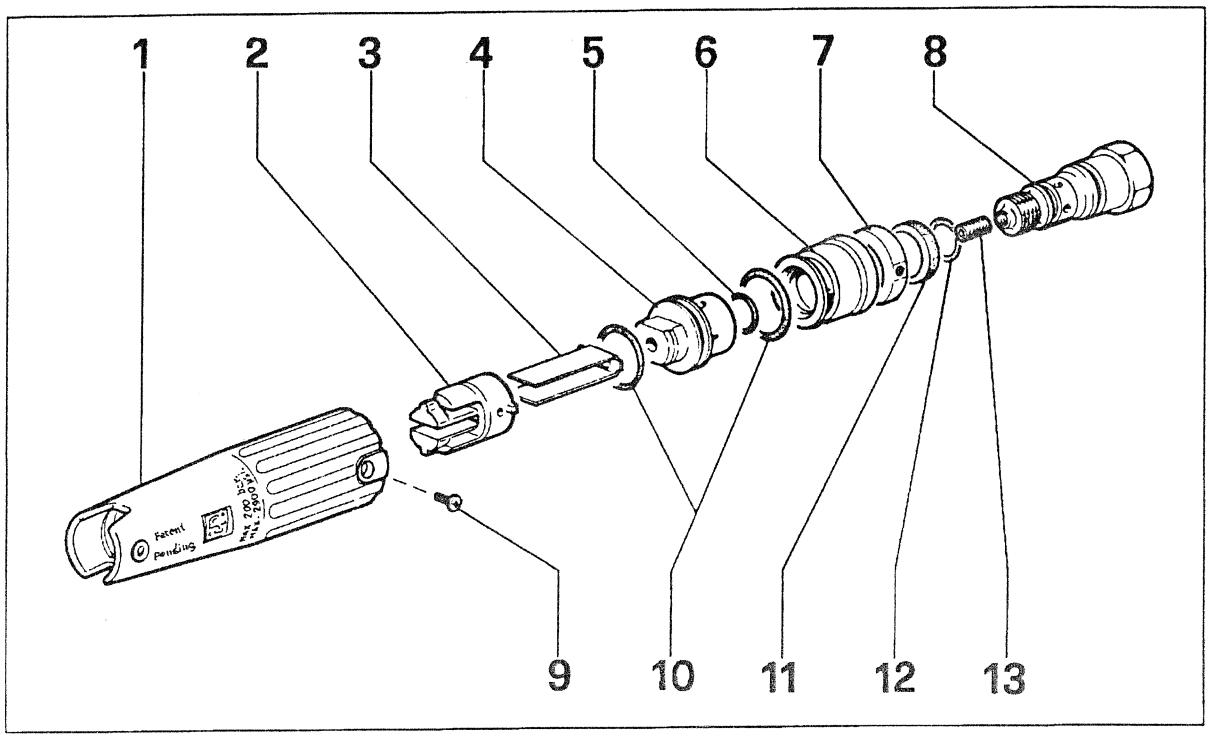
Includes Items 6-30 / Includes Items 1-30



POS.	N. PCS.
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	3
14	1
15	1
16	1

POS.	N. PCS.
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1

KIT N.	KIT 103	KIT 104
PARTS INCLUDED	9 - 10 - 11 12 - 14	9 - 10 - 11 - 12 14 - 15 - 25 - 26 27 - 28 - 29
N. pcs.	1	1

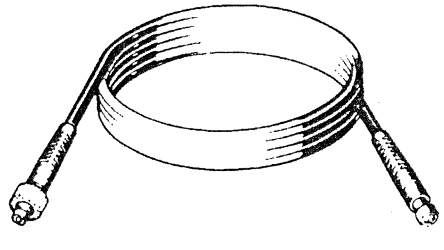


POS.	PART CODE	N. PCS.
1	10.0483.51	1
2	10.0299.51	1
3	10.0304.76	1
4	10.0486.70	1
5	90.3819.00	1
6	10.0485.70	1
7	10.0496.70	1

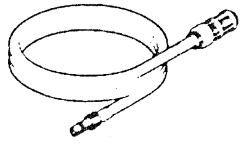
POS.	PART CODE	N. PCS.
8	10.0484.70	1
9	99.0702.00	1
10	90.3845.00	2
11	90.2680.00	1
12	90.3827.00	1
13	98.6674.00	1

- HIGH PRESSURE HOSE
- TUYAU HAUTE PRESSION
- TUBO DE ALTA PRESION

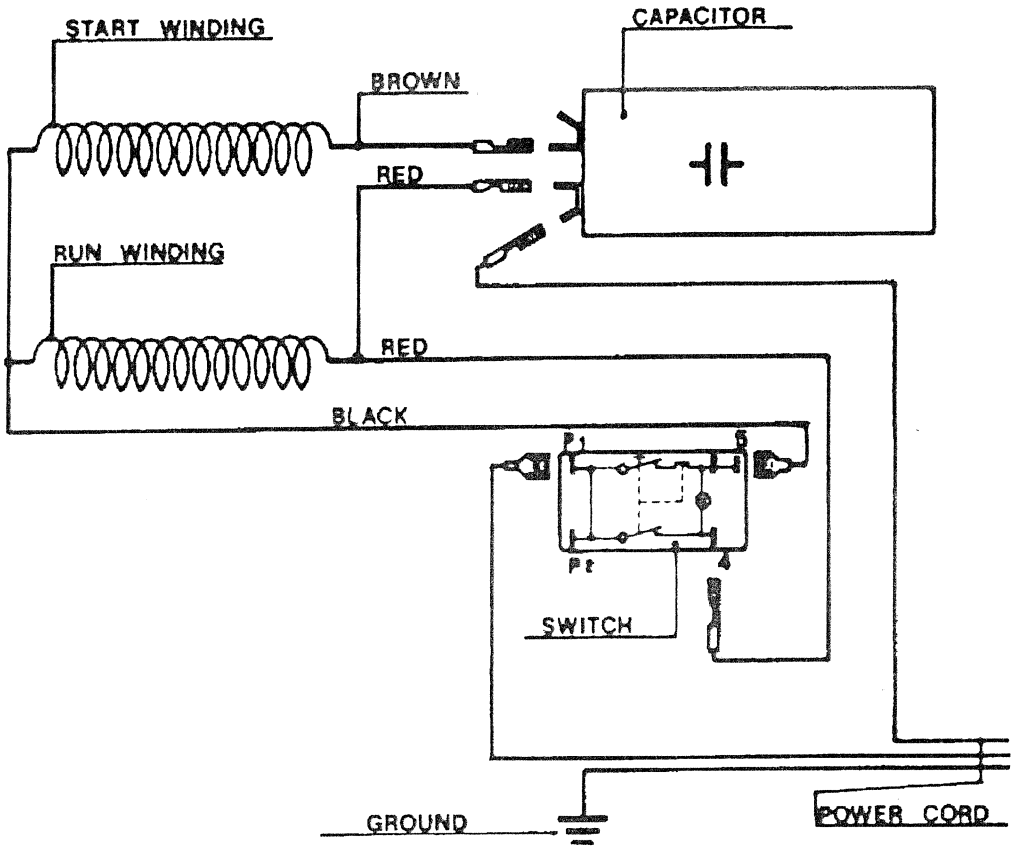
- CHEMICAL FILTER KIT
- KIT FILTRE DÉTERGENT
- KIT FILTRO PARA DETERGENTE



PART CODE : **ZTUBIN**(26 Ft.)
ZTUBIN16(52 Ft.)



PART CODE : **ZFILKIT**



CAUTION

CAUTION: Repairs by qualified personnel only.

PRECAUTION: Réparations par personnel specialisé seulement.

PRECAUCION: Unicamente personal calificado deberia hacer reparaciones.

Grounding Instructions

CAUTION: This pressure washer is equipped with a UL approved ground fault circuit interrupter (GFCI) power cord. Use UL grounded type receptacles of proper voltage and amperage ratings. Where a properly grounded receptacle is not available, it is the personal responsibility of the owner to have one installed. Always disconnect power before servicing your pressure washer.

Extension Cords

WARNING: This machine is equipped with a 35 Ft. long power cord protected by a ground fault circuit interrupter (GFCI). Do not use extension cords due to possible severe electrical shock and/or damage to machine.

Connect electrical cord to an overload protected 115VAC/60Hz/1 Phase ground circuit, minimum 15 ampere rated. Test the GFCI using the reset and test procedure conveniently located on the GFCI device. The GFCI must be reset and tested with every use.

Bowman Distribution BARNES GROUP INC

Warranty

BOWMAN DISTRIBUTION ONE-YEAR LIMITED WARRANTY:

Bowman Distribution pressure washers are warranted by the Bowman Distribution (Bowman Distribution), to be free of defects in material and workmanship under normal use, for a period of ONE YEAR from the date of the original purchase. Items that fail due to normal wear such as pump seals, pump valves, unloader valves, detergent valves, water nozzles, quick couplings, hoses, gunjets, o-rings, etc. are not covered under this warranty. Damage resulting from neglect, abuse, tampering, modification or misuse is not covered under this warranty. All defects must be verified by Bowman Distribution. (Please note: Certain specific items carry a longer than one year warranty: chassis assembly and pulleys - 3 years; high pressure pump, heating coils, plumbing and belts - 2 years. This additional warranty will be in effect as applicable.)

LIMITATION OF LIABILITY:

To the extent allowable under applicable law, Bowman Distribution liability for consequential and incidental damages is expressly disclaimed. Bowman Distribution liability in all events is limited to, and shall not exceed, the purchase price paid for the equipment. Bowman Distribution liability excludes field labor charges, loss of use of the unit, loss of time or rental, inconvenience, or commercial loss and is limited to repair or replacement of defective parts only, at the option of Bowman Distribution.

WARRANTY DISCLAIMER:

Bowman Distribution has made a diligent effort to illustrate and describe the product in this literature accurately; however, such illustrations and descriptions are for the sole purpose of identification, and do not express or imply a warranty that the product is merchantable, or fits a particular purpose, or that the product will necessarily conform to the illustrations or descriptions.

PRODUCT SUITABILITY:

Many states and localities have codes and regulations governing sales, construction, installation, and/or use of products for certain purposes, which may vary from those in neighboring areas. While attempts to assure that its products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a product, please review the product application, and national and local codes and regulations, and be sure that the product, installation, and use will comply with them.

PROMPT DISPOSITION:

Bowman Distribution will make a good faith effort for prompt correction or other adjustments with respect to any product which proves to be defective within limited warranty. For any product believed to be defective within limited warranty, contact dealer from whom product was purchased. Dealer will give additional directions. If unable to resolve satisfactorily, write to Bowman Distribution at address below, giving dealer's name, address, date of purchase, model, serial number, and describing the nature of the defect. If product was damaged in transit to you, file claim with freight carrier.

Bowman Distribution
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